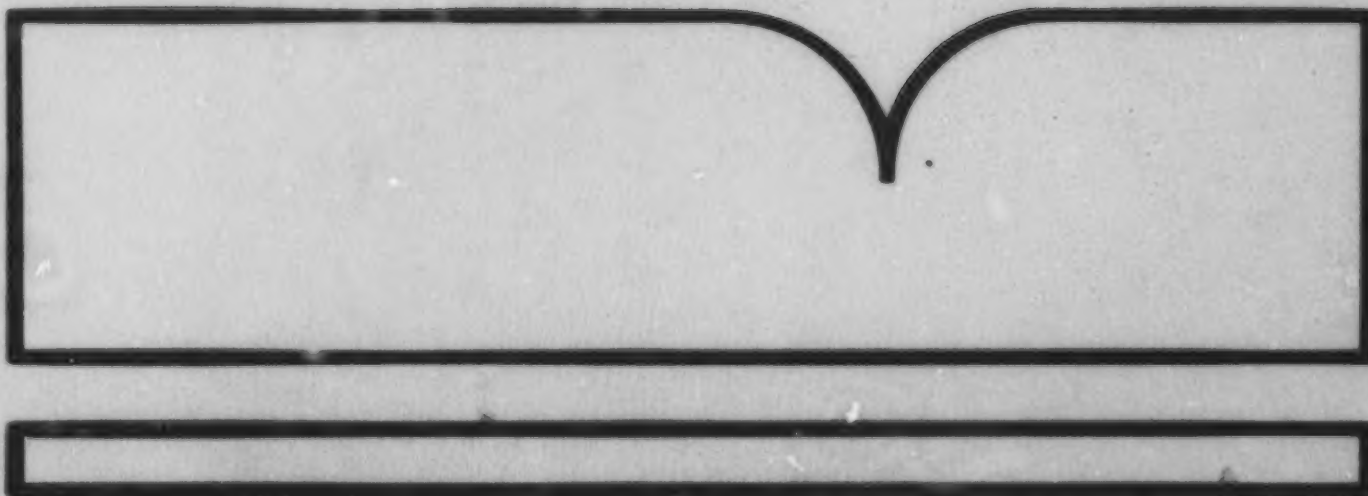


PB87-117172

Guidance for the Reregistration of
Pesticide Products Containing Aluminum or
Magnesium Phosphide as the Active Ingredient

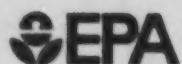
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Washington, DC

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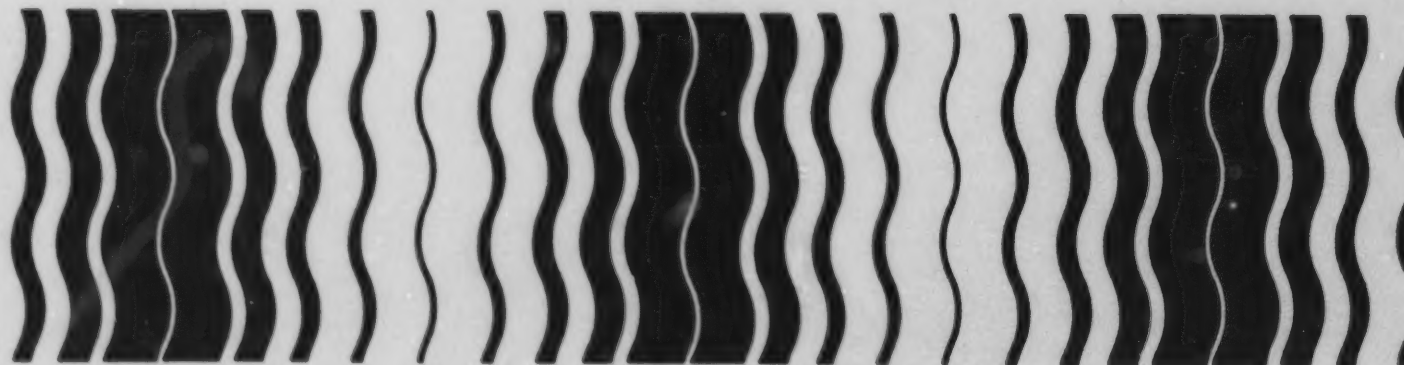


U.S. Department of Commerce
National Technical Information Service

NTIS



Guidance for the Reregistration of Pesticide Products Containing Aluminum Or Magnesium Phosphide as the Active Ingredient



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GUIDANCE FOR THE
REREGISTRATION OF PESTICIDE PRODUCTS
CONTAINING

ALUMINUM OR MAGNESIUM PHOSPHIDE

AS THE ACTIVE INGREDIENT

CASE NUMBERS 0025 AND 0645

CAS REGISTRY NUMBER 20859-73-8 AND 12057-74-8

OCTOBER 8, 1986

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
WASHINGTON, D.C. 20460

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I. INTRODUCTION

This is a revised version of the registration standards which were issued by the Environmental Protection Agency in October 1981 for aluminum and magnesium phosphide. The requirements contained in this document supersede those prescribed in the previous edition of the standard. This document also supersedes the Label Improvement Program Notice of November 15, 1984, which was issued as Pesticide Registration Notice 84-5, and PR Notice 85-6 of August 30, 1985. The Agency decided to remove aluminum or magnesium phosphide fumigants from the requirements of the LIP notices in order to prescribe new labeling requirements which are consistent with data submitted by registrants in response to data gaps identified by the 1981 standards.

In February 1986 the Agency issued an amended registration standard for aluminum and magnesium phosphide. However, in response to many comments received, those amended standards are being withdrawn and are superseded by this amended standard. Consequently, the deadlines for implementation of labeling changes have been changed. Registrants must submit draft labeling for approval no later than October 31, 1986. Products sold by the registrant or others must bear revised labeling as of March 31, 1987.

EPA has established the Registration Standards program in order to provide an orderly mechanism by which pesticide products containing the same active ingredient can be reviewed and standards set for compliance with FIFRA. The standards are applicable to reregistration and future applications for registration of products containing the same active ingredient. Each registrant of a product containing an active ingredient subject to this Standard who wishes to continue to sell or distribute that product must bring the product and labeling into compliance with FIFRA, as instructed by this Standard. Pesticides have been grouped into use clusters and will be reviewed on the basis of a ranking scheme giving higher priority to (1) pesticides in clusters used on food and feed crops; and (2) pesticides produced in large volumes.

The Registration Standards program involves a thorough review of the scientific data base underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential hazards arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects, and to determine whether the pesticide meets the "no unreasonable adverse effects" criteria of FIFRA. In its review EPA identifies:

1. Studies that are acceptable to support the data requirements for the currently registered uses of the pesticide.

2. Additional studies necessary to support continued registration. The additional studies may not have been required when the product was initially registered or may be needed to replace studies that are now considered inadequate.

3. Labeling revisions needed to ensure that the product is not misbranded and that the labeling is adequate to protect man and the environment.

The detailed scientific review, which is not contained in this document, but is available upon request¹, focuses on the pesticide active ingredient. The scientific review primarily discusses the Agency's evaluation of and conclusions from available data in its files pertaining to the pesticide active ingredient. However, during the review of these data the Agency is also looking for potential hazards that may be associated with the end use products that contain the active ingredient. The Agency will apply the provisions of this Registration Standard to end use products if necessary to protect man and the environment.

EPA's reassessment results in the development of a regulatory position, contained in this Registration Standard, on the pesticide and each of its registered uses. See Section II - Regulatory Position and Rationale. Based on its regulatory position, the Agency may prescribe a variety of steps to be taken by registrants to maintain their registrations in compliance with FIFRA. These steps may include:

1. Submission of data in support of product registration:
2. Modification of product labels;
3. Modifications to the manufacturing process of the pesticide to reduce the levels of impurities or contaminants;
4. Restriction of the use of the pesticide to certified applicators or other specially trained individuals;
5. Modification of uses or formulation types; or
6. Specification of packaging limitations.

Failure to comply with these requirements may result in the issuance of a Notice of Intent to Cancel or a Notice of Intent to Suspend (in the case of failure to submit data).

¹The scientific reviews may be purchased from the Information Services Section, Program Management and Support Division (TS-757C), EPA, 401 M St. SW, Washington, DC 20460.

In addition, in cases in which hazards to man or the environment are identified, the Agency may initiate a special review of the pesticide in accordance with 40 CFR Part 154 to examine in depth the risks and benefits of use of the pesticide. If the Agency determines that the risks of the pesticide's use outweigh the benefits of use, the Agency may propose additional regulatory actions, such as cancellation of uses of the pesticide which have been determined to cause unreasonable adverse effects on the environment.

EPA has authority under the Data Call-In (DCI) provisions of FIFRA sec. 3(c)(2)(B) to require that registrants submit data to answer our questions regarding the chemical, toxicological, and environmental characteristics and fate of a pesticide. This Registration Standard lists the data EPA believes are necessary to resolve our concerns about this pesticide. These data are listed in the Tables A, and B in Appendix I. Failure to comply with the DCI requirements enumerated in this Registration Standard may result in issuance by EPA of a Notice of Intent to Suspend the affected product registrations.

Registrants are reminded that FIFRA sec. 6(a)(2) requires them to submit factual information concerning possible unreasonable adverse effects of a pesticide at any time that they become aware of such information. You should notify the Agency of any information, including interim or preliminary results of studies, if those results suggest possible adverse effects on man or the environment. This requirement continues as long as your products are registered by the Agency.

II. REGULATORY POSITION AND RATIONALE

A. Introduction

This amended registration standard describes the current regulatory position of the Environmental Protection Agency for all registered manufacturing use pesticides (MUPs)^{1/} containing aluminum or magnesium phosphide as the sole active ingredient. End use pesticides (EUPs)^{2/} are reviewed and reregistered under a registration standard when there are no registered MUPs containing the chemical under review or when significant label changes are required for the EUPs that will allow continued registration and use of these products without any unreasonable adverse effects to humans or the environment.

There are no registered manufacturing use products containing aluminum or magnesium phosphide as the sole active ingredient; and significant labeling changes are prescribed by this amended standard for end use products containing this active ingredient. Hence, for both reasons stated above, end use products with aluminum or magnesium phosphide must be registered or reregistered in accordance with the requirements of this amended standard within the deadlines specified in it.

Future requests for registrations of substantially similar products will be considered for registration/reregistration under this amended standard. Dissimilar products may be evaluated for registration. If registered, the standard will be amended accordingly. After briefly discussing the chemical and its uses, this chapter presents the current regulatory position and rationale, the criteria for registration, acceptable ranges and limits, applicable data requirements and labeling considerations.

^{1/} An MUP is one which is registered for incorporation, formulation, or repackaging into an EUP. Labels for MUPs must bear all necessary statements consistent with Section 162.10 of 40 CFR, with the exception that they do not bear specific use directions for application and use of the pesticide.

^{2/} EUPs must bear complete labeling including use directions, or at least minimum labeling for the intended uses and a referral statement indicating where the expanded use directions can be obtained.

In developing its regulatory position the Agency determines whether available data indicate that a pesticide has met or exceeded the criteria for unreasonable adverse effects to humans or the environment, as specified in Section 154.7 of Title 40 of the U.S. Code of Federal Regulations (CFR). Pesticides meeting these criteria are candidates for a special pesticide review, an intensive risk/benefit assessment. The Agency's determination as to whether any of these criteria have been triggered and its rationale for any regulatory actions are summarized in the regulatory position of this amended standard.

B. Description of the chemical and its uses

1. Chemical and Physical Characteristics

Pure aluminum or magnesium phosphide occurs as a solid, dark, gray material (granules or powder). It must be protected from moisture in the atmosphere in air-tight containers. Contact of the solid material with moisture in the air, with water, or with acids causes it to release phosphine which is a highly toxic gas. The residue remaining from this reaction is aluminum hydroxide. The formula for pure aluminum phosphide is AlP ; the molecular weight is 57.96; the American Chemical Society's Chemical Abstracts Service (CAS) number is 20859-73-8, and the EPA Registry Code number is 066501. For magnesium phosphide, the formula is MgP ; the molecular weight is 134.79; the CAS number is 12057-74-8; and the EPA Registry Code is 066504.

2. Registered Uses

The primary uses of aluminum or magnesium phosphide are indoor fumigation of agricultural food commodities, animal feeds, processed food commodities, and non-food commodities (tobacco), in sealed containers or structures to control insects which attack these commodities; and outdoor fumigation of burrows to control rodents and moles in non-domestic areas away from dwellings.

C. Regulatory Position and Rationale

1. Basic Product Chemistry

To register or reregister products containing aluminum or magnesium phosphide under this amended standard, each registrant must provide product specific data in accordance with the product chemistry data requirements.

Rationale: Data on the chemical and physical properties of the pure grade of aluminum or magnesium phosphide are available from the public literature. This information is useful since it provides basic information that aluminum phosphide in its dry form is relatively stable if protected from moisture but that it readily releases phosphine gas if it comes in contact with moisture from the air, water or acids. However, this information does not fulfill the basic product chemistry requirements to support registration/reregistration of pesticides containing aluminum or magnesium phosphide because such products are not pure. They contain deliberately added inert ingredients which may differ from one product to another.

Product chemistry data are product specific and must be developed for the particular product in question and submitted for each pesticide product proposed for registration. Only in those instances where one product is identical to another can the data for the one be used in support of the other. An example of this situation is when a registered pesticide belonging to one firm is purchased and repackaged by another.

There are no products registered which consist solely of the technical grade of the active ingredient, TGAI^{1/} aluminum or magnesium phosphide, or in combination with other deliberately added ingredients. Nevertheless, this amended standard contains data tables itemizing the applicable product chemistry requirements for these types of products in the event such products are proposed for registration under this standard.

2. Acute Toxicity Data

The Agency has waived the requirement for registrants to submit acute toxicity data for aluminum or magnesium phosphide products.

Rationale: The Agency routinely requires acute toxicity data for each product proposed for registration to place the product in its appropriate toxicity categories with respect to ingestion hazards, dermal acute toxicity,

^{1/} The Technical Grade of an Active Ingredient (TGAI) is that grade of a pesticide which can be manufactured from starting materials, consistent with good chemical manufacturing practice, on a production scale, without deliberately added inert ingredients, such as solvents, diluents, stabilizers, emulsifiers, etc. Generally, the TGAI is the highest concentration that is practical to produce without exhaustive purification procedures and only contains impurities resulting from side reactions of the starting materials.

dermal irritation, eye irritation and inhalation hazards. The results of the data dictate appropriate precautionary labeling for the product consistent with the general labeling requirements of Section 162.10 of 40 CFR.

In the case of aluminum or magnesium phosphide products, the Agency has waived the requirement for registrants to develop and submit acute toxicity data for their products because the high acute toxicity of aluminum or magnesium phosphide is well known. As soon as aluminum or magnesium phosphide comes in contact with moisture or water it releases phosphine gas which is known to be highly toxic by inhalation. Therefore, the Agency considers aluminum or magnesium phosphide to be as highly toxic as phosphine and has placed it in toxicity category I, the highest category.

3. Acute Toxicity Risks

The Agency has determined that the registered uses of aluminum or magnesium phosphide will not generally cause unreasonable acute adverse effects to humans or to the environment, provided that the pesticide is used in accordance with the approved use directions and revised precautionary statements prescribed by this amended standard.

Rationale: As described in detail in sections II.B.6. and 9. below, the Agency has classified all end use products as restricted use materials and has required extensive new label precautions, exposure limits and respiratory protection for applicators and workers during application and reentry, revised storage and disposal procedures, placarding requirements and other label revisions which should prevent unsafe exposures to phosphine gas.

4. Chronic Toxicity and Dietary Exposure

No chronic toxicology or residue chemistry data are required for aluminum or magnesium phosphide or phosphine gas with respect to potential dietary exposure to these chemicals.

Rationale: The 1981 registration standards for aluminum and magnesium phosphide reserved chronic toxicology studies until certain chemically uncharacterized residues which result from the treatment of food are characterized and evaluated. Subsequent to the 1981 registration standards, the Agency has received information^{1/} which identifies these formerly unidentified residues as oxidation products of phosphine

^{1/} Nature of the Residues Arising from Fumigation of Food Commodities with Metal Phosphide, (conclusions drawn from the public literature), by Donald G. Shaheen. Submitted to the Agency on behalf of Degesch America, Inc., May 1982.

(phosphorus oxy-acids and/or their salts). Having reviewed these data, the Agency has concluded that these decomposition products of phosphine are toxicologically insignificant at the levels found in the treated commodities. Hence, the Agency has waived the requirements for residue, metabolism and storage stability data.

5. Chronic Toxicity Risks and Worker/Applicator Exposure

Toxicity tests (subchronic inhalation, teratogenicity and mutagenicity) and exposure (monitoring) data are required to assess the margins of safety for workers and applicators exposed to phosphine gas. No further toxicity or exposure data are needed for aluminum or magnesium phosphide per se.

Rationale: The Agency does not have adequate data to determine whether phosphine gas may cause any long term adverse (chronic) effects on humans and the environment. The 1981 registration standards for aluminum or magnesium phosphide reserved chronic toxicology studies until receipt and review of reentry data. The 1981 standards stated that when reentry data are received and evaluated to determine if there is any exposure to the applicator, the Agency would determine whether mutagenicity, teratology and additional subchronic inhalation studies are required.

In response to the 1981 standard, the Agency received re-entry studies from the registrants. ^{1/} Levels of phosphine in the air were monitored after treating tobacco with aluminum or magnesium phosphide in hogsheads. Aeration was achieved by natural circulation of air through the vents of the structures. The data show that with adequate aeration phosphine levels in fumigated structures can be reduced to non-detectable levels (less than 0.1 ppm or 0.14 mg/m³). The data also show that if structures are closed before complete aeration, and later re-opened, the concentration of phosphine in the work area can rise as a result of gassing-off of phosphine from the treated commodity. Based on the reentry studies, the Agency concluded that a limit of less than 0.1 ppm was feasible and imposed this limit in the February 1986 amended standards. On the assumption that no exposure would occur, EPA waived all chronic toxicity data.

^{1/} Degesch America, Inc.; and Research Products Co; PestCon Systems.

However, new information has been submitted which shows that exposure to phosphine gas can occur during application. Surveys conducted by the National Institute for Occupational Safety and Health at three grain elevators in 1985 demonstrated a wide range of exposures. In one elevator, where ventilation was poor, exposures ranged from 0.23 ppm to 1.08 ppm as a time weighted average (TWA), in general exceeding the Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) of 0.3 ppm (8 hour time weighted average). In a second elevator, where ventilation was better, exposures ranged from 0.01 ppm to 0.77 ppm TWA. In a third elevator, with good ventilation, no phosphine was detected. Data submitted by Quaker Oats Company and Phillip Morris Company also show exposures occurring during various types of fumigation.¹ The Agency is also aware that exposures can occur during transfer and handling of treated commodities.

With the knowledge that exposure to phosphine gas can occur during fumigation and transfer and handling of treated commodities, the Agency has re-examined the need for chronic toxicity and exposure data. The current OSHA PEL of 0.3 ppm as an 8 hour time weighted average (TWA) is apparently based on subchronic data showing no deaths in animals exposed to 2.5 ppm phosphine several hours per day for 28 weeks. However, these animals exhibited serious toxic effects in several organs at this level. The Agency has concluded that the available data are not adequate to establish a no observed effect level (NOEL) for phosphine. The following toxicity testing for phosphine is required: a 90 day subchronic inhalation study in rats, an inhalation teratology study in one species and a battery of mutagenicity studies. To quantify exposures to phosphine which may occur, worker/applicator monitoring studies are required for major use sites. These toxicity and exposure studies will be used to assess the margins of safety of worker exposures to phosphine and to determine whether the interim exposure standards described in Section II.B.9. are adequate to protect workers. Another objective of the studies is to attempt to develop short exposure limits (SEL's) which might allow shorter exposures at higher concentrations than currently permitted by the OSHA PEL. Protocols for the toxicology and exposure studies must be submitted to the Agency for review prior to initiation of studies.

6. Restricted Use Classification

End-use pesticides containing aluminum or magnesium phosphide are classified for restricted use and may be applied only by or in the physical presence of an applicator certified in an appropriate category. All training programs leading to certification of applicators must be reviewed and, if

¹ These data were submitted and entered into EPA Public Docket #D-05640.

necessary, upgraded. The upgraded training must include classroom training utilizing comprehensive training manuals and provide on-the-job training or "hands on" experience. State, Indian tribes and Federal agency programs for the certification of applicators will necessarily be upgraded because of changes in the supporting training.

It is the responsibility of the certified applicator to properly instruct the noncertified applicator under his supervision in proper preparation and application procedures, emphasizing the hazards to human health and appropriate safety precautions. The product manual which accompanies the applicable product label will be utilized in training non-certified applicators. The actual physical presence of a certified applicator during use of these products is required.

Rationale: The use of aluminum or magnesium phosphide results in release of phosphine, a highly toxic gas. Because of the potential hazard to humans and nontarget organisms and because of the need for the applicator to be knowledgeable about the extensive label requirements, the pesticide will remain classified as a restricted use pesticide consistent with 40 CFR 154.7.

Applicators who supervise application of aluminum and magnesium phosphide must be certified in an appropriate category by a State or Indian tribe or Federal agency under a plan approved by EPA as required by 40 CFR 171. EPA recognizes that training materials and programs leading to certification may be in need of improvement, including the need for revised training manuals and requiring hands on experience and/or training. Accordingly, EPA, with the U.S. Department of Agriculture, is sponsoring a train-the-trainer national fumigation workshop in September 1987. Concurrently with the train-the-trainer workshop, EPA will, in cooperation with the U.S. Department of Agriculture, State Cooperative Extension Services, State pesticide regulatory agencies and other public and private groups, develop upgraded training packages addressing the safe and effective use of these and other fumigants. An EPA approved product manual will be included as part of the product label. Persons working with these products and applying these materials in the physical presence of a certified applicator are required to be trained in accordance with the product manual.

7. Ecological Effects on Non-Target Organisms

Ecological effects data are not required to register or reregister products under this amended standard. However, standardized environmental hazard statements are required for MUPs and special hazard statements are required to protect certain endangered species for those EUPs recommended for the control of rodents. These statements are prescribed in Section II.F.2. of this amended standard.

Rationale: The Agency routinely requires that ecological effects data be developed with the technical grade of the active ingredient of a pesticide, if it is feasible to develop such data in accordance with EPA guidelines. The results of the data developed with the TGAI determine the appropriate environmental hazard statements required for labels of MUPs, consistent with 40 CFR 162.10(h)(2)(ii).

In the case of aluminum or magnesium phosphide, development of these data with the TGAI is not required because the phosphine gas which is liberated from the pesticide when it is exposed to air is highly toxic.

Thus, on the basis that phosphine is a highly toxic gas to a wide range of living organisms, the Agency is prescribing environmental hazard statements for MUPs and special precautionary labeling to protect endangered species for EUPs recommended for rodent control. These statements appear in Section II.F.2. of this standard.

EUPs which are recommended solely for indoor use (fumigation of sealed areas, structures, or containers loaded with commodities) are not required to bear environmental hazard statements on their labels because indoor uses do not pose a risk to non-target organisms.

8. Environmental Fate

The 1981 standard required that hydrolysis, volatility and reentry data be submitted to assess the environmental fate of aluminum or magnesium phosphide for the registered uses. The Agency has reviewed this information from registrants responding to the 1981 standard and has concluded that aluminum or magnesium phosphide products may be registered or reregistered provided registrants comply with the applicable disposal statements and the revised and expanded labeling requirements prescribed in this amended standard.

Rationale: Phosphine gas liberated from aluminum or magnesium phosphide eventually dissipates into the atmosphere. The resulting residue is aluminum hydroxide, a relatively inert and innocuous material which is a common constituent of clay. Additionally, spent pellets, tablets or product in moisture permeable envelopes may be disposed of by burial in a sanitary landfill. Sometimes the aluminum or magnesium phosphide formulation is not completely reacted when it is removed from a fumigated area. This "green" material (a dust or product in bags or envelopes) may be deactivated and disposed of safely as long as the label procedures are followed.

9. Applicator and Worker Exposure

Until required toxicology and exposure data are received and reviewed, applicators and workers may be exposed to no more than 0.3 ppm phosphine (8 hour TWA) during application and to no more than 0.3 ppm phosphine (maximum concentration) at any time after application. The application and monitoring procedures described below are required to assure that these exposure limits are not exceeded. If the exposure limits are exceeded, steps must be taken to either reduce the exposure or to provide adequate respiratory protection.

Rationale: Aluminum or magnesium phosphide reacts slowly with moisture in the air. Prior to this amended standard, the Agency believed that this relatively slow reaction would allow the applicator enough time to place the pesticide at the desired location and to vacate the area without being exposed to significant concentrations of phosphine gas. The Agency's only concern was whether a fumigated area would be adequately aerated prior to reentry. However, as discussed above in Section II.B.5., new data show that exposure can occur during application of the fumigant, especially in confined spaces where ventilation is poor. Also, the Agency is now aware of incidents of exposure to workers and inspectors involved with the transfer or handling of treated commodities.

Until adequate toxicology and exposure data are developed to accurately determine safe levels to phosphine gas, the Agency is adopting on an interim basis the OSHA PEL of 0.3 ppm phosphine (8 hour TWA) for applicators and workers during application. Application is defined as the time period covering opening the first container, applying the appropriate dosage of the fumigant and closing up the site to be fumigated. All persons in the treated site and in adjacent indoor areas are covered by this exposure standard. Employers of the applicators and workers are encouraged to use engineering controls, such as forced air ventilation, as the primary means of maintaining exposure below the standard.

If the fumigant is applied from outside of a confined or enclosed space the applicator may place the fumigant and immediately leave the area without being exposed to levels of phosphine which exceed the standard. Examples include a railroad car or automatic dispenser located outside of an enclosed area. Because exposure to phosphine is likely to be less than the exposure standard of 0.3 ppm (8 hour TWA), neither monitoring nor use of respiratory protection equipment is necessary during application from outside a confined space.

When the fumigant is applied from within a confined space, phosphine gas may accumulate and levels may exceed 0.3 ppm (8 hour TWA). Therefore, applications within a confined space must be monitored. A sufficient number of samples should be taken in places where worker exposure is likely to occur in order to establish that the exposure standard is not exceeded. If monitoring equipment is not available, such as on a farm, an approved canister respirator must be worn during application from within a confined space. If an approved respirator is not available, application must be done from outside the site to be fumigated.

It is recommended that the applicator or employer document exposure readings in an operation log or manual for each fumigation site. Once exposures have been adequately characterized for a particular site, subsequent monitoring is not routinely required for each application. However, spot checks should be made, especially if conditions significantly change (such as temperature, humidity, etc.) or if a garlic odor is detected. If 0.3 ppm or less phosphine is detected, no respiratory protection is required even if a garlic odor has been previously detected. If more than 0.3 ppm is detected in the worker's breathing zone, the area must be immediately ventilated until a subsequent reading (15 minutes later) is at or below 0.3 ppm phosphine. Otherwise, the area must be vacated or approved respiratory protection worn as described below.

If the exposure limits cannot be met through engineering controls, respiratory protection must be worn. A NIOSH/MSHA approved full face canister respirator may be used at levels up to 15 ppm for entry and up to 1500 ppm for escape from a confined space. To enter a confined space with phosphine above 15 ppm or at unknown levels, Self Contained Breathing Apparatus (positive air pressure type) must be used. The NIOSH/OSHA Pocket Guide, 8-85, DHEW/NIOSH 78-210 also lists other types of approved respi-

rators and their approved limits. If the fumigant is applied from within an enclosed area, a canister respirator must be available at the site. When applicators are applying fumigant from within a confined space, self contained breathing apparatus (SCBA) must be available either at the site or locally (i.e., fire station, rescue squad) for use in certain emergency situations such as spills, leaks or rescues where levels of phosphine are above 15 ppm or unknown. Two trained persons must be present if application is done within a confined space or during reentry into an unaerated space.

After application, exposure of any person to phosphine may not at any time exceed 0.3 ppm (maximum concentration). Such exposures may occur if the commodity or space under fumigation leaks, when treated commodity is transferred or handled, if someone reenters an unaerated or partially aerated space, etc. Monitoring should be performed as described for application to assure that this exposure limit is not exceeded. If exposures cannot be reduced to acceptable levels, the same respiratory protection requirements apply as during application.

Because phosphine gas is highly mobile and may penetrate seemingly gas-tight materials such as concrete and cinder block, adjacent indoor areas likely to be occupied must be checked for leaks. Sealing of the fumigated site and/or airflow in the occupied areas must be sufficient to meet the exposure limit of 0.3 ppm (maximum concentration).

A treated commodity does not necessarily need to be aerated immediately, as it may be desirable to store a treated commodity for a long period without aeration. However, a space or commodity must be aerated to 0.3 ppm or less phosphine in the worker's breathing zone before reentry is allowed. Reentry at higher levels requires the use of an appropriate respirator.

Worker exposure during storage, transfer and handling of a treated commodity (raw, processed or finished) is covered by the exposure limit of 0.3 ppm (maximum concentration). Although reentry normally applies to a person entering a treated area, in this case a treated commodity may enter the workplace, resulting in the same potential for exposure as normal reentry. Monitoring must be conducted to establish that the exposure limit is not exceeded at any time during these activities.

10. Placarding

All entrances to a fumigated site must be placarded (except as noted below for railroad hopper cars). Placards should be placed in advance of the fumigation where possible. Placards are required for each fumigated site (such as a bin or railroad car) for all registered commodities (raw, processed and finished products). A placard may only be removed after the commodity is completely aerated. To determine whether aeration is complete, each fumigated site or vehicle must be monitored and shown to contain 0.3 ppm or less phosphine gas in the air pocket around and in the mass of the commodity. It is recommended that only a trained person conduct the monitoring for phosphine gas. If more than 0.3 ppm phosphine is detected, the placard must be transferred from one site to another. Persons transferring or handling the commodity must be informed if more than 0.3 ppm is detected and appropriate measures taken to assure that they are not exposed to more than 0.3 ppm phosphine (maximum concentration).

Rationale: All entrances to a fumigated area must be placarded in order to inform all persons of when and where the fumigation will take place, who is responsible and whom should be contacted in event of emergency. Where possible, placards should be placed in advance of the fumigation in order to keep unauthorized persons away. For railroad hopper cars, placarding must be placed on both sides of the car near the ladders and next to the top hatch into which the fumigant is introduced.

In order to prevent worker exposures over 0.3 ppm (maximum concentration), a placard may only be removed after a commodity is completely aerated. Complete aeration must be determined by monitoring each site (for example, each bin or railroad car) in the air space and in the commodity mass. If 0.3 ppm or less phosphine is detected, the placard may be removed. However, if more than 0.3 ppm is detected, the placard must be transferred with the commodity. Workers who transfer or handle incompletely aerated commodity must be informed and appropriate measures taken (i.e., ventilation or respiratory protection) to prevent exposures from exceeding 0.3 ppm.

It is recommended that the person removing the placard be trained. Training should cover physical, chemical and toxicological properties of phosphine; how to take gas readings; the exposure limits for phosphine; and symptoms of and first aid treatment for poisoning. The training should include "hands on" experience from an experienced fumigator.

11. Ground Water Contamination

Use of aluminum or magnesium phosphide is unlikely to contribute to groundwater contamination. Labeling pertaining to potential groundwater contamination is not necessary.

Rationale: The patterns of use for aluminum or magnesium phosphide are as an indoor fumigant for sealed structures or vehicles and for outdoor rodent or mole control. There is no likelihood of contamination of ground water from these uses. The same rationale stated in Section II.B.8. above supports this position.

12. Tolerance Reassessment

Tolerances have been reassessed and are adequate for the protection of the public. Tolerances in the United States are listed in 40 CFR §180.225 for aluminum phosphide and in 40 CFR §180.377 for magnesium phosphide.

Tolerances have been established for aluminum and magnesium phosphide in processed foods (21 CFR §193.20 and §193.225) and animal feeds (21 CFR §561.40 and §561.268) for residues of phosphine. Such residues may not exceed 0.01 ppm on processed foods and 0.1 ppm on animal feed.

Finished food and feed must be aerated 48 hours prior to being offered to the consumer; tobacco fumigated in hogsheads must be aerated 72 hours. Registrants or users who would like approval for shorter aeration periods based on forced air ventilation may submit residue data conducted in accordance with the Agency's guidelines.

Tolerances are established for residues of phosphine in or on all raw agricultural commodities at 0.01 ppm resulting from preharvest treatment of pest burrows in agricultural and noncropland areas with aluminum or magnesium phosphide (40 CFR §180.225 and §180.377).

Although not officially accepted, CODEX has recommended phosphine tolerances as follows:

<u>Commodity</u>	<u>Residue in ppm</u>
Cereals, raw	0.1
Breakfast cereals	0.01
Flour and other milled products	0.01
Dried Vegetables	0.01
Spices	0.01

In Canada, residues of phosphine in excess of 0.1 ppm are not permitted in raw cereals, soybeans, processed food, or animal feeds.

Rationale: The 1981 standards allowed the established tolerances on condition that certain unidentified residues in treated commodities be fully identified, at which time the Agency would re-evaluate the existing tolerances.

As noted in the 1981 standards for aluminum and magnesium phosphide, under typical fumigation conditions, phosphine reacts with raw agricultural commodities to form irreversibly bound residues in the treated commodities, and probably with most processed foods and feeds. These data also indicated that these irreversibly bound residues are quantitatively dependent on the conditions of fumigation.

Thus, under conditions typical for the fumigation of wheat, such residues ranged in amounts from 3-5 ppm. In 1981, only about 70% of the total bound residues were identified as the oxy-acids of phosphorus (phosphoric, phosphorus and hypophosphorus) and the Agency determined that these residues were toxicologically insignificant.

The Agency indicated that the identity of the remaining residues (0.7 ppm, about 30% of the total) constituted a significant data gap. Nevertheless, the Agency decided to allow the established tolerances pending submission and evaluation of the necessary data, as a preliminary step to reassessing the established tolerances for aluminum and magnesium phosphide.

Submitted data indicate that the formerly unidentified residues are oxidation products from phosphine, i.e. phosphorus oxy-acids and/or their salts. Based on these data, the Agency has determined that these residues also are toxicologically insignificant. Therefore, no further residue data are required to support the established tolerances for aluminum or magnesium phosphide.

D. Criteria for Registration Under This Amended Standard

To be subject to this standard, products must contain aluminum or magnesium phosphide as the only active ingredient, conform to the product composition, acute toxicity limits, use pattern requirements, and the required labeling as prescribed in various sections of this standard, in addition to those prescribed in Section II.F. of this standard.

Applicants for registration or reregistration of aluminum or magnesium phosphide products subject to this amended standard must comply with all terms and conditions described, including submission of an up-to-date Confidential Statement of Formula, submission of revised labeling, and a commitment to satisfy the applicable data requirements appearing in the data tables at the end of this regulatory chapter. Registrants should note that certain product specific chemistry data must be submitted for all products registered or reregistered under this standard.

Registrants who do not qualify for the formulator's exemption^{1/} must satisfy the applicable generic data requirements by submitting or citing data for unregistered technical grade of aluminum phosphide.

E. Acceptable Ranges and Limits

1. Product Composition

a. MUPs

Currently there are no products registered as MUPs with aluminum or magnesium phosphide as the sole active ingredient. Products proposed for registration may consist solely of the technical grade of the active ingredient or they may consist of the TGAI plus other deliberately added inert ingredients in formulations which are similar or identical to those which have been registered as EUPs.

However, only those deliberately added inert ingredients which are exempt from the requirement of a tolerance are acceptable in products which are recommended to be mixed directly with commodities. See 40 CFR §180.1001. If an MUP is to be formulated or repackaged into an EUP which is intended solely as a space fumigant, the or inert ingredients need not be exempt from the requirement of a tolerance.

b. EUPs

To be registered or reregistered under this standard, end-use products must contain only aluminum or magnesium phosphide as the active ingredient (at any specified concentration) and impurities derived from the TGAI. products. Given the instability of aluminum or magnesium phosphide and the registered patterns of use, it is not practical or desirable to register a

^{1/} To qualify for the formulator's exemption and not be obligated to address the generic data requirements of this standard, a registrant must purchase a registered source of the active ingredient contained in his/her product. Since all of the currently registered products containing aluminum or magnesium phosphide are formulated none of the current registrants qualify for the formulator's exemption.

product for end use which consists solely of the technical grade of aluminum or magnesium phosphide. End use products intended solely as space fumigants may contain impurities from the TGAI, and deliberately added inert ingredients which are not exempt from the requirement of a tolerance. However, EUPs which are recommended to be mixed directly with agricultural food commodities may only contain inert ingredients which are exempt from the requirement of a tolerance.

2. Acute Toxicity Limits

EPA will only consider MUPs and EUPs containing aluminum or magnesium phosphide for registration or reregistration under this standard in Toxicity Category I, the highest toxicity category.

3. Use Patterns

MUPs will be considered for registration provided their labels specify that they are for use in formulating EUPs only for the use patterns currently registered for these pesticides. Labels for MUPs must specify the types of products which may be formulated from them, e.g., insecticide (commodity fumigant) and rodenticide; and they must identify the registered use patterns. EUPs will be registered or reregistered in the form of discs, plates, pellets or tablets for one or more of the following uses:

- a. Food/Feed, Nondomestic, Indoor Use (raw agricultural commodities)
- b. Food/Feed, Nondomestic, Indoor Use (animal feed)
- c. Food/Feed, Nondomestic, Indoor Use (processed commodities)
- d. Nonfood/Nonfeed and Food/Feed , Nondomestic, Outdoor Use (rodent control)

A comprehensive description of application rates, sites, pests and limitations for the approved uses of aluminum phosphide can be found in the EPA Indexes to Pesticide Chemicals for Aluminum and Magnesium Phosphide, EPA 1981.

F. Required Labeling

Besides complying with the general labeling requirements of Section 162.10 of 40 CFR, MUPs and EUPs containing aluminum or magnesium phosphide must comply with certain additional labeling requirements imposed by this part of the amended standard.

The Agency has reviewed data submitted by registrants in response to the 1981 standard and has also taken into consideration relevant comments and data received in 1986. EPA has concluded that the labels for aluminum or magnesium phosphide products must be further modified to minimize the potential hazards which these products may pose to humans and non-target organisms. These labeling requirements supersede those which were previously prescribed by the Label Improvement Notice which was issued for all fumigants as PR Notice 84-5 on November 15, 1984. This part of the amended standard specifies the current labeling requirements for registration or reregistration of aluminum or magnesium phosphide products under this amended standard. Products in channels of trade must bear revised labeling complying with this standard no later March 31, 1987. Registrants must submit draft labeling for approval no later than October 31, 1986.

1. Precautionary Statements

The following precautionary statements are required on labeling for products containing aluminum or magnesium phosphide. Registrants should note that although all of these requirements apply to EUPs, only certain of them apply to MUPs. Those that apply to both types of products are so indicated; those that apply only to EUPs are indicated.

a. Restricted Use Statement (EUPs only; on label and in product manual)

The following restricted use classification statement and accessory restrictive statements must appear prominently displayed on the front panel of all EUPs containing aluminum or magnesium phosphide:

RESTRICTED USE PESTICIDE
DUE TO ACUTE INHALATION TOXICITY OF HIGHLY TOXIC
PHOSPHINE GAS

For retail sale to and use only by Certified Applicators for those uses covered by the applicators certification or persons trained in accordance with the attached product manual working under the direct supervision and in the physical presence of the Certified Applicator. Read and follow the label and the (Company Name) product manual which contains complete instructions for the safe use of this pesticide.

[The label must also provide precautionary statements, statement of practical treatment and storage and disposal. The product manual must provide, but need not be limited to: precautionary statements, hazards to humans and domestic animals, statement of practical treatment, note to physician, physical and chemical hazards, detailed directions for use, protective clothing, respiratory protection, placarding requirements, aeration of fumigated commodities, storage and handling, disposal instructions, spill and leak procedures and references to regulations applicable from other agencies.]

- b. Spanish Warning Statement (to be located on the front panel for MUPs and EUPs)

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta se le haya sido explicado ampliamente.

- c. Front Panel Signal Word (MUPs and EUPs)

The English and Spanish signal words DANGER and PELIGRO are required on the front panel together with the word POISON, in red, and the skull and crossbones.

- d. Human Hazard Precautionary Statements (Located on the front or side panel for MUPs and EUPs under the heading "Hazards to Humans and Domestic Animals" and in product manual).

KEEP OUT OF REACH OF CHILDREN [EUP's only]

DANGER - POISON

Aluminum or magnesium phosphide powder, granules or tablets may be fatal if swallowed. Do not get in eyes, on skin or on clothing. Do not eat, drink or smoke while handling aluminum or magnesium phosphide fumigants. If a sealed container is opened, or if the material comes in contact with moisture, water or acids, extremely toxic phosphine gas will be released. If a garlic odor is detected, you must monitor to determine whether phosphine gas is present above the acceptable exposure limits (see section on respiratory protection). Since an odor may not be detected under certain circumstances, the absence of a garlic odor does not mean that phosphine

gas is absent. Observe proper application, aeration, reentry and disposal procedures specified elsewhere in the labeling to prevent overexposure.

- e. Practical Treatment Statement (located on front panel for MUPs and EUPs and in the product manual)

Symptoms of overexposure to phosphine are headache, dizziness, nausea, difficult breathing, vomiting and diarrhea. In all cases of overexposure get medical attention immediately. Take victim to a doctor or emergency treatment facility.

If the gas from aluminum or magnesium phosphide is inhaled: Get exposed person to fresh air. Keep warm and make sure person can breathe freely. If breathing has stopped, give artificial respiration by mouth-to-mouth or other means of resuscitation. Do not give anything by mouth to an unconscious person.

If aluminum or magnesium phosphide powder, granules, or tablets are swallowed: Drink or administer one or two glasses of water and induce vomiting by touching back of throat with finger, or if available, syrup of ipecac. Do not give anything by mouth if victim is unconscious or not alert.

If powder, granules or tablets of aluminum or magnesium phosphide get on skin: Brush material off clothes and shoes in a well ventilated area. Allow clothes to aerate in a ventilated area prior to laundering. Wash contaminated bare skin thoroughly with soap and water.

If in eyes: Flush with plenty of water. Get medical attention.

- f. Note to Physician (located in a separate paragraph with human hazard statements on the label for MUPs and EUPs and in product manual)

Aluminum or magnesium phosphide granules, powder or tablets react with moisture in the air, acids and many other liquids to release phosphine gas. Mild exposure by inhalation causes malaise, ringing of ears, fatigue, nausea, and pressure in the chest which is relieved by removal to fresh air.

Moderate poisoning causes weakness, vomiting, epigastric pain, chest pain, diarrhea and dyspnea. Severe poisoning may occur in a few hours to several days, resulting in pulmonary edema and may lead to dizziness, cyanosis, unconsciousness and death.

Severe poisoning may occur in a few hours to several days, resulting in pulmonary edema and may lead to dizziness, cyanosis, unconsciousness and death.

In sufficient quantity, phosphine affects the liver, kidneys, lungs, nervous system and circulatory system. Inhalation can cause lung edema and hyperemia, small perivascular brain hemorrhages and brain edema. Ingestion can cause lung and brain symptoms, but damage to the viscera is more common. Phosphine poisoning may result in (1) pulmonary edema; (2) liver elevated serum GOT, LDH and alkaline phosphatase, reduced prothrombin, hemorrhage and jaundice; and (3) kidney hematuria and anuria. Pathology is characteristic of hypoxia. Frequent exposure over a period of days or weeks may cause poisoning. Treatment is symptomatic.

[The remaining items must appear either on the label or in the product manual. The product manual is considered supplemental labeling and must be submitted and approved by the Agency before distributed in channels of trade].

g. Directions for Use: (EUPs only; on label or in product manual)

This fumigant is a highly hazardous material and may only be used by individuals trained in its proper use. Before using, read and follow all precautions and directions on the label and in the product manual.

Persons applying this fumigant must complete an EPA approved training program for fumigants.

At least two trained persons must be present when it is applied from within a confined space or during reentry into a fumigated or partially aerated site.

Prior to applying this product, you must inspect the site to be fumigated to determine if it can be made sufficiently gas tight. You should also develop a plan for monitoring (if not done before), how to most efficiently and safely apply the fumigant, emergency procedures, etc. Notify appropriate company employees and local officials having jurisdiction (fire department, rescue squad, police, etc.) over the fumigation site. Follow all local and state regulations.

Shipholds, barges, containers on ships railroad cars and containers shipped piggyback by rail may be fumigated in transit. However, trucks, vans trailers and similar transport vehicles cannot be moved until the fumigation is completed.

Do not fumigate commodities with this product when commodity temperature is below 40° F (5° C). [Registrants must specify the number of days required for efficacious fumigation for various temperature ranges. For example, commodity at 40°-49°--at least X days, commodity at 50-59°--at least Y days, etc.]

[Specific use directions follow. The registrant must provide complete step-by-step directions for each use site--for example, railcar fumigation, warehouses and mills, tarpaulin fumigation, ships, trucks, etc. Use directions may appear on the label and/or in the product manual. Illustrations or pictures may be used to demonstrate application methods.]

h. Protective Clothing (for EUPs only on label or in product manual)

Wear dry gloves when handling unpackaged tablets or pellets. Wash hands thoroughly after use before smoking or eating.

i. Applicator and Worker Exposure (for EUPs only; on label or in product manual)

Depending upon temperature and humidity, this product will release phosphine gas slowly upon exposure to moisture from the air. However, because of the potential for applicators and workers to be exposed to phosphine gas during fumigation, the following exposure limits and respiratory protection requirements apply.

Exposure to phosphine gas may not exceed 0.3 ppm measured as an 8 hour time-weighted average (TWA) for applicators and workers during application. Application is defined as the time period covering the opening of the first container, applying the appropriate dosage of fumigant and closing up the site to be fumigated. All persons in the treated site and in adjacent indoor areas are covered by this exposure standard. Engineering controls such as forced air ventilation should be the primary means used to meet this exposure standard.

If the fumigant is applied from outside of a confined or enclosed space (for example, a railroad car or an automatic dispenser located outside of an enclosed area), the applicator may apply the fumigant and immediately leave the area without being exposed to gas levels in excess of the standard. Therefore, neither monitoring nor respiratory protection equipment is needed during fumigation from outside a confined space, such as addition of fumigant to automatic dispensing devices located outdoors, to burrows of rodents or moles away from buildings, to railroad cars located outside, etc.

If the applicator enters a confined or enclosed space to fumigate, monitoring with a low level detection device is necessary. It is recommended that a sufficient number of readings must be taken where worker exposure is likely to occur in order to establish that the exposure standard is not exceeded. Adjacent indoor areas likely to be occupied should be checked for leaks. If monitoring equipment is not available, such as at a farm site, an approved canister respirator must be worn for indoor application. If an approved respirator is not available, application must be done from outside of the site to be fumigated.

It is recommended that the applicator or employer document exposure readings in an operation log or manual for each fumigation site. Once exposures have been adequately characterized for a site, subsequent monitoring is not routinely required for each application. However, spot checks should be made, especially if conditions significantly change or if a garlic odor is detected. If 0.3 ppm or less phosphine is detected, no respiratory protection is required even if a garlic odor had been previously detected. If more than 0.3 ppm phosphine is detected in the worker's breathing space, the area must be ventilated until a subsequent reading (15 minutes later) is at or below 0.3 ppm. Otherwise, the area must be vacated or approved respiratory protection worn as described below.

If the exposure limits cannot be met through engineering controls (such as forced air ventilation), a full-face canister respirator approved by NIOSH/MSHA for aluminum or magnesium phosphide must be worn. This respirator may be used to enter an area with levels up to 15 ppm or to escape an area with levels up to 1500 ppm. Above

these levels or where levels are unknown, a NIOSH/MSHA approved self contained breathing apparatus (SCBA), positive air pressure type, must be used. The NIOSH/OSHA Pocket Guide, 8-85, DHEW/NIOSH 78-210 lists these and other types of approved respirators and their limits.

A NIOSH/MSHA approved full-face canister respirator must be available on site if the fumigant is applied from within an enclosed area. When the fumigant is applied from within a confined space, an SCBA respirator must also be available either on site or locally such as at a fire station or rescue squad. The SCBA is needed in the event that a spill, leak or rescue situation arises where the level of phosphine gas exceeds 15 ppm or is unknown. Two trained persons must be present during application indoors or during reentry into an unaerated space.

After application, exposure for any person may not exceed 0.3 ppm phosphine (maximum concentration). Such exposures may occur if the commodity or space under fumigation leaks, when treated commodity is transferred or handled, if someone reenters an unaerated or partially aerated space, etc. Monitoring should be performed as described above to assure that this exposure limit is not exceeded. If exposures cannot be reduced to acceptable levels, the same respiratory protection requirements apply as above.

Because phosphine gas is highly mobile and may penetrate seemingly gas-tight materials such as concrete and cinder block, adjacent indoor areas likely to be occupied must be checked for leaks. Sealing of the fumigated site and/or airflow in the occupied areas must be sufficient to meet the exposure limit of 0.3 ppm (maximum concentration).

A treated commodity does not necessarily need to be aerated immediately, as it may be desirable to store it for a long period without aeration. However, a space or commodity must be aerated to 0.3 ppm or less phosphine in the worker's breathing zone before reentry is allowed. Reentry at higher levels requires the use of an approved respirator (see approved respirators described above).

Worker exposure during storage, transfer and handling of a treated commodity (raw, processed or finished) is covered by the exposure limit of 0.3 ppm (maximum concentration). Monitoring must be conducted as previously described to prevent overexposure at any time during these activities.

[The registrant must identify the specific monitoring devices recommended to determine the levels of phosphine in the work area and provide or reference instructions for their use. The registrant may also identify specific respirators to be used with the fumigant].

j. Placarding of Areas (for EUPs only; on label or in product manual)

The applicator must placard or post all entrances to the fumigated area with signs bearing:

1. The signal word DANGER/PELIGRO and the SKULL and CROSSBONES symbol in red.
2. The statement, "Commodity under fumigation, DO NOT ENTER/NO ENTRE".
3. The statement, "This sign may only be removed after the commodity is completely aerated (contains 0.3 ppm or less phosphine gas). If incompletely aerated commodity is transferred to a new site, the new site must also be placarded and workers must not be exposed to more than 0.3 ppm phosphine."
4. The date and time fumigation begins and is completed.
5. Name of fumigant used.
6. Name, address and telephone number of the applicator.

All entrances to a fumigated area must be placarded. Where possible, placards should be placed in advance of the fumigation in order to keep unauthorized persons away. For railroad hopper cars, placarding must be placed on both sides of the car near the ladders and next to the top hatch into which the fumigant is introduced.

Do not remove a placard until the treated commodity is completely aerated. Complete aeration must be determined by monitoring each site (for example, each bin or railroad car) in the air space and in the commodity mass. If 0.3 ppm or less phosphine is detected, the placard may be removed. However, if more than 0.3 ppm is detected, the placard must be transferred with the commodity to the new site. Workers who transfer or handle incompletely aerated commodity must be informed and appropriate measures must be taken (i.e., ventilation or respiratory protection) to prevent exposures from exceeding 0.3 ppm phosphine.

It is recommended that the person removing the placard be trained. Training should cover physical, chemical and toxicological properties of phosphine; how to take gas readings; the exposure limits for phosphine; and symptoms of and first aid treatment for poisoning.

k. Aeration of Fumigated Commodities for Tolerance Purposes
(EUP only; on label or in product manual)

The following statement is required on labeling for aluminum or magnesium phosphide products recommended for fumigation of foods/feeds and tobacco to prevent the established tolerances from being exceeded:

Tolerances for phosphine residues have been established at 0.1 ppm for animal feeds and 0.01 ppm for finished foods. To assure compliance with these tolerances, it is necessary to aerate these commodities 48 hours prior to offering them to the end consumer. Tobacco must be aerated for at least three days when fumigated in hogsheads. As an alternative to these aeration periods, each container of a treated commodity may be analyzed for residues using accepted analytical methods. If residues are less than tolerance levels, the commodity may be shipped to the consumer regardless of the above holding periods.

l. Storage and Handling (MUPs and EUPs)

Store in a dry, well ventilated area away from heat, under lock and key. Post as a pesticide storage area. Do not contaminate water, food or feed by storing pesticides in the same areas used to store these commodities. Do not store in buildings inhabited by humans or domestic animals.

m. Disposal Statements (MUPs and EUPs)

[Label statements must conform to the requirements of PR Notice 83-3, March 29, 1983. They must also be appropriate for the type of pesticide and size and type of the container.]

The following statements are suggested. Registrants may submit alternative label language for consideration.

(1) General Disposal statements (MUPs and EUPs)

Do not contaminate water, food or feed by storage or disposal.

Unreacted or partially reacted aluminum or magnesium phosphide is acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office of guidance. For specific instructions, see Spill and Leak Procedures.

Some local and state waste disposal regulations may vary from the following recommendations. Disposal procedures should be reviewed with appropriate authorities to ensure compliance with local regulations. Contact your state Pesticide or Environmental Control Agency or Hazardous Waste Specialist at the nearest EPA Regional Office for guidance.

Triple rinse flasks and stoppers with water. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Rinsate may be disposed of in a sanitary sewer, sanitary landfill or by other approved procedures. It is also permissible to remove lids and expose empty flasks outdoors until residue in the flasks is reacted. Then puncture and dispose of in a sanitary landfill or other approved site, or by other procedures approved by state and local authorities.

If properly exposed, the residual dust remaining after a fumigation with aluminum or magnesium phosphide will be grayish-white and contain only a small amount of unreacted material. However, residual dust from incompletely exposed aluminum or magnesium phosphide will require special care.

(2) Directions for Disposal of Spent Residue from Aluminum or Magnesium Phosphide (EUPs only; on label or in product manual)

In open areas, small amounts of completely spent residual dust may be disposed of on site by burial or by spreading over the land surface away from inhabited buildings.

Spent residual dust, bags or other packaging containing spent aluminum or magnesium phosphide may also be collected and disposed of at a sanitary landfill, incinerator or other approved sites or by other procedures approved by federal, state or local authorities.

For 2 to 3 kg (4 to 7 lbs) of spent dust from 2 to 3 flasks of aluminum or magnesium phosphide may be collected for disposal in a 1-gallon bucket. Larger amounts, up to about one-half case, may be collected in burlap, cotton or other types of porous cloth bags for transportation in an open vehicle to the disposal site. Do not collect dust from more than 7 flasks of tablets or 10 flasks of pellets (about 11 kg or 25 lbs) in a single bag. Do not pile cloth bags together. Do not collect dust, bags or other types of packaging in large drums, dumpsters, plastic bags or other containers where confinement may occur.

(3) Directions for Deactivation of Partially Spent Residues from Aluminum or Magnesium Phosphide (EUPs only; on label or in product manual)

Confinement of partially spent residues in a closed container, or collection and storage of large quantities of partially spent product may result in a fire hazard. Small amounts of phosphine may be given off from unreacted aluminum or magnesium phosphide, and confinement of the gas may result in a flash.

Partially spent product must be deactivated further prior to ultimate disposal. This is especially true in cases of incomplete exposure which has resulted in so-called "green dust" or following a fumigation which has produced large quantities of partially spent material.

Residual dust from aluminum or magnesium phosphide may be deactivated as follows using the "Wet Method."

Deactivating solution is prepared by adding the appropriate amount of low sudsing detergent or surface active agent to water in a drum or other suitable container. The container should be filled with deactivating solution to within a few inches of the top.

Residual product is poured slowly into the deactivating solution and stirred so as to thoroughly wet all of the spent aluminum or magnesium phosphide. This must be done in the open air and not within an enclosed space. Residue from aluminum or magnesium phosphide tablets or pellets should be mixed into no less than about 10 gallons of water-detergent solution for each case of material used.

Dispose of the deactivated residue-water suspension, with or without preliminary decanting, at a sanitary landfill or other suitable site approved by local authorities. Where permissible, the slurry may be poured into a storm sewer or out onto the ground.

Respiratory protection is required during wet deactivation of partially spent material. Do not cover the container holding the slurry at any time. Do not dispose of dust in a toilet. Do not allow quantities of dry product residue from aluminum or magnesium phosphide to be collected or stored without deactivation.

n. Spill and Leak Procedures (on label of MUPs and EUPs)

A spill, other than incidental to application or normal handling, may produce high levels of gas and, therefore, attending personnel must wear SCBA or its equivalent when the concentration of phosphine gas is unknown. Other NIOSH/MSHA approved respiratory protection may be worn if the concentration is known. Do not use water at any time to clean up a spill of aluminum or magnesium phosphide. Water in contact with unreacted tablets or pellets will greatly accelerate the production of phosphine gas which could result in a toxic and/or fire hazard. Wear cotton gloves when handling pesticides.

Return all intact aluminum flasks to cardboard cases or other suitable packaging which has been properly marked according to DOT regulations. Notify consignee and shipper of damaged cases.

If aluminum flasks have been punctured or damaged so as to leak, the container may be temporarily repaired with aluminum tape or the aluminum or magnesium phosphide may be transferred from the damaged flask to a sound metal container which should be sealed and properly labeled as aluminum or magnesium phosphide. Transport the damaged containers to an area suitable for pesticide storage for inspection. Further instructions and recommendations may be obtained, if required, from (company name).

If a spill has occurred which is only a few minutes old, collect the tablets and pellets and place them back into the original flasks, if they are intact, and stopper tightly. Place the collected tablets and pellets in a sound metal container if the original flasks are damaged. Caution: these flasks may flash upon opening at some later time.

If the age of the spill is unknown or if the tablets and pellets have been contaminated with soil, debris, water, etc. gather up the spillage and place it into small open buckets having a capacity no larger than about 1 gallon. Do not add more than about one flask of spilled material, 1 to 1.5 kg (2 to 3 lbs), to the bucket. If on-site, wet deactivation is not feasible, these open containers should be transported in open vehicles to a suitable area away from inhabited buildings. Wet deactivation may then be carried out as described under storage and disposal.

If the contaminated material is not completely reacted by exposure to atmospheric moisture, deactivate the product by the "Wet Method" as follows:

Deactivating solution is prepared by adding the appropriate amount of low sudsing detergent or surface active agent to water in a drum or other suitable container. A 2% solution or 4 cups in 30 gallons is suggested. The container should be filled with deactivating solution to within a few inches of the top.

The tablets or pellets are poured slowly into the deactivating solution and stirred so as to thoroughly wet all of the product. This should be done in the open air. aluminum or magnesium phosphide tablets or pellets should be mixed into no less than about 15 gallons of water-detergent solution for each case of spent material. Allow the mixture to stand, with occasional stirring, for about 36 hours. The resultant slurry will then be safe to dispose of.

Dispose of the slurry of deactivated material, with or without preliminary decanting, at a sanitary landfill or other suitable site approved by local authorities. Where permissible, this slurry may be poured into a storm sewer or out onto the ground.

Respiratory protection is required during wet deactivation of unexposed product. Never place pellets, tablets or dust or other formulations in a closed container such as a dumpster, sealed drum, plastic bag, etc., as flammable concentrations and a flash of phosphine gas are likely to develop.

o. Physical/Chemical Hazards (EUP label or product manual)

Aluminum or magnesium phosphide in tablets, pellets and partially spent dust will release phosphine gas if exposed to moisture from the air or if it comes into contact with water, acids and many other liquids. Piling of tablets, pellets or dust from their fragmentation may cause a temperature increase and confine the release of gas so that ignition could occur.

Always open containers of aluminum or magnesium phosphide products outdoors as under certain conditions, they may flash upon opening. When opening, point the container away from the face and body and slowly loosen the cap. Although the chances for flash are very remote, never open these containers in a flammable atmosphere. These precautions will also reduce the applicator's exposure to phosphine gas.

Pure phosphine gas is practically insoluble in water, and oils, and is stable at normal fumigation temperatures. However, it may react with certain metals and cause corrosion, especially at higher temperatures and relative humidities. Metals such as copper, brass and other copper alloys, and precious metals such as gold and silver are susceptible to corrosion by phosphine. Thus, small electric motors, smoke detectors, brass sprinkler heads, batteries and battery chargers, fork lifts, temperature monitoring systems, switching gears, communication devices, computers calculators and other electrical equipment should be protected or removed before fumigation.

Phosphine gas will also react with certain metallic salts and, therefore, sensitive items such as photographic film, some inorganic pigments, etc., should not be exposed.

2. Environmental Hazards

a. MUPs

Labels for MUPs containing aluminum or magnesium phosphide as the active ingredient must bear the following statements under the appropriate heading as shown below, consistent with 40 CFR 162.10(h)(2)(ii):

ENVIRONMENTAL HAZARDS: This product is toxic to fish and wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters, unless this product is specifically identified and addressed in a National Pollutant Discharge Elimination System (NPDES) permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board, or Regional Office of EPA.

b. EUPs

Environmental hazard statements are only required for end-use pesticides when one or more of the registered uses poses the same risks as the MUPs, or when they pose additional risks.

The use of aluminum or magnesium phosphide to fumigate commodity storage areas or containers does not require environmental hazard statements because this use is considered an indoor use. Furthermore, this use does not pose any risks to nontarget organisms because the fumigant released by aluminum or magnesium phosphide is a gas and dissipates into the atmosphere.

The use of aluminum or magnesium phosphide as a rodenticide does pose some risk to non-target organisms. Hence labels for EUPs bearing rodenticidal uses must bear the following precautionary labeling:

(i) Under the heading "Environmental Hazards":

This product is very highly toxic to wildlife. Non-target organisms exposed to phosphine gas in burrow will be killed. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes.

(ii) Under the heading "Endangered Species Restrictions":

The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species or adversely modify their habitat is a violation of federal laws. The use of this product is controlled to prevent death or harm to endangered or threatened species that occur in the following counties or elsewhere in their range.

STATE (REGIONAL OFFICE FWS) Species	: COUNTY (UNLESS SPECIFIED)	
ARIZONA (ALBUQUERQUE, N.M.)		
Black-footed ferret	STATEWIDE	
CALIFORNIA (PORTLAND, OR.) San Joaquin Kit-Fox	KERN KINGS TULARE FRESNO VENTURA	MERCED MONTEREY SAN BENITO SAN LUIS OBISPO SANTA BARBARA
Blunt-nosed Leopard Lizard	KERN KINGS FRESNO	MADERA MERCED TULARE
COLORADO (DENVER, CO.) Black-footed Ferret		
	STATEWIDE	
FLORIDA (ATLANTA, GA.) Eastern Indigo Snake		
	STATEWIDE	
GEORGIA (ATLANTA, GA.) Eastern Indigo Snake		
	STATEWIDE	
KANSAS (DENVER, CO.) Black-footed ferret		
	STATEWIDE	
MONTANA (DENVER, CO.) Black-footed ferret		
	STATEWIDE	
NEBRASKA (DENVER, CO.) Black-footed ferret		
	STATEWIDE	
NEW MEXICO (ALBUQUERQUE, N.M.) Black-footed ferret		
	STATEWIDE	
NORTH DAKOTA (DENVER, CO.) Black-footed ferret		
	STATEWIDE	
OKLAHOMA (ALBUQUERQUE, N.M.) Black-footed ferret		
	STATEWIDE	
SOUTH DAKOTA (DENVER, CO.) Black-footed ferret		
	STATEWIDE	
TEXAS (ALBUQUERQUE, N.M.) Black-footed ferret		
	STATEWIDE	
UTAH (DENVER, CO.) Desert Tortoise		
	WASHINGTON	
Black-footed ferret		
	STATEWIDE	
WYOMING (DENVER, CO.) Black-footed ferret		
	STATEWIDE	

Use of this product in the above areas is prohibited without first contacting and obtaining permission from the Endangered Species Specialist in the regional offices of the U.S. Fish and Wildlife Service (FWS) nearest you.

III. PRODUCTS SUBJECT TO THIS STANDARD

All products containing aluminum or magnesium phosphide are subject to certain requirements for data submission or changes in composition, labeling or packaging of the product. The applicable requirements depend on whether the product is a manufacturing or end use product and whether the pesticide is the sole active ingredient or one of multiple active ingredients.

Products are subject to this Registration Standard as follows:

A. Manufacturing use products containing aluminum or magnesium phosphide as the sole active ingredient are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section II, if they pertain to the manufacturing use product.
2. The data requirements listed in Tables A and B ¹
3. The labeling requirements specified for manufacturing use products in Section II.
4. Administrative requirements (application forms, Confidential Statement of Formula, data compensation provisions) associated with reregistration.

¹ Data requirements are listed in the two Tables in Appendix I of this Registration Standard. The Guide to Tables in that Appendix explains how to read the Tables.

Table A lists generic data requirements applicable to all products containing aluminum or magnesium phosphide. Table B lists product-specific data applicable to manufacturing use products. The data in Tables A and B need not be submitted by a producer who is eligible for the formulator's exemption.

B. Manufacturing use products containing aluminum or magnesium phosphide in combination with other active ingredients are subject to:

The data requirements listed in Table A.

C. End use products containing aluminum or magnesium phosphide alone or in combination with other active ingredients are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section II if they pertain to the end use product.
2. If not eligible for the formulator's exemption¹, the data requirements listed in Table A.
3. The labeling requirements specified for end use products in Section II.

¹ If you purchase from another producer and use as the source of your active ingredient only EPA-registered products, you are eligible for the formulator's exemption for generic data concerning that active ingredient (Table A) and product-specific data for the registered manufacturing use product you purchase (Table B).

Two circumstances nullify this exemption:

- 1) If you change sources of active ingredient to an unregistered product, formulate your own active ingredient, or acquire your active ingredient from a firm with ownership in common with yours, you lose the exemption and become subject to the data requirements in Table A.
- 2) If no producer subject to the generic data requirements in Table A agrees to submit the required data, all end use producers lose the exemption, and become subject to those data requirements.

IV. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

This portion of the Registration Standard is a notice issued under the authority of FIFRA sec. 3(c)(2)(B). It refers to the data listed in Table A, which are required to be submitted by registrants to maintain in effect the registration of products containing this active ingredient.¹

A. What are generic data?

Generic data pertain to the properties or effects of a particular active ingredient. Such data are relevant to an evaluation of all products containing that active ingredient regardless of whether the product contains other ingredients. (unless the product bears labeling that would make the data requirement inapplicable).

Generic data may also be data on a "typical formulation" of a product. "Typical formulation" testing is often required for ecological effects studies and applies to all products having that formulation type. These are classed as generic data, and are contained in Table A.

B. Who must submit generic data?

All current registrants are responsible for submitting generic data in response to a data request under FIFRA sec. 3(c)(2)(B) (DCI Notice). EPA has decided, however, not to require a registrant who qualifies for the formulator's exemption (FIFRA sec. 3(c)(2)(D) and § 152.85) to submit generic data in response to a DCI notice if the registrant who supplies the active ingredient in his product is complying with the data request.

If you are not now eligible for a formulator's exemption, you may qualify for one if you change your source of supply to a registered source that does not share ownership in common with your firm. If you choose to change sources of supply, the Confidential Statement of Formula must identify the new source(s) and you must submit a Formulator's Exemption Statement form.

If you apply for a new registration for products containing this active ingredient after the issuance of this Registration Standard, you will be required to submit or cite generic data relevant to the uses of your product if, at the time

¹ Registrations granted after issuance of this Standard will be conditioned upon submission or citation of the data listed in this Registration Standard.

the application is submitted, the data have been submitted to the Agency by current registrants. If the required data have not yet been submitted, any new registration will be conditioned upon the new registrant's submission or citation of the required data not later than the date upon which current registrants of similar products are required to provide such data. See FIFRA sec. 3(c)(7)(A). If you thereafter fail to comply with the condition of that registration to provide data, the registration may be cancelled (FIFRA sec. 6(e)).

C. What generic data must be submitted?

You may determine which generic data you must submit by consulting Table A. That table lists the generic data needed to evaluate current uses of all products containing this active ingredient, the uses for which such data are required, and the dates by which the data must be submitted to the Agency.

D. How to comply with DCI requirements.

Within 90 days of your receipt of this Registration Standard, you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1, enclosed) for each of your products. On that form you must state which of the following six methods you will use to comply with the DCI requirements:

1. You will submit the data yourself.

2. You have entered into an agreement with one or more registrants to jointly develop (or share in the cost of developing) the data, but will not be submitting the data yourself. If you use this method, you must state who will submit the data on which you will rely. You must also provide EPA with documentary evidence that an agreement has been formed which allows you to rely upon the data to be submitted. Such evidence may be: (1) your letter offering to join in an agreement and the other registrant's acceptance of your offer, (2) a written statement by the parties that an agreement exists, or (3) a written statement by the person who will be submitting the data that you may rely upon its submission. The Agency will also require adequate assurance that the person whom you state will provide the data is taking appropriate steps to secure it. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or a mechanism to resolve the terms.

3. You have attempted to enter into an agreement to jointly develop data, but no other registrant has accepted your offer. You request that EPA not suspend your registration for non-compliance with the DCI. EPA has determined that, as a general policy, it will not suspend the registration of a product when the registrant has in good faith sought and continues to seek to enter into a data development/cost sharing program, but the other registrants developing the data have refused to accept its offer. [If your offer is accepted, you may qualify for Option 2 above by entering into an agreement to supply the data.]

In order to qualify for this method, you must:

1. File with EPA a completed "Certification of Attempt to Enter into an Agreement with other Registrants for Development of Data" (EPA Form 8580-6, enclosed).

2. Provide us with a copy of your offer to the other registrant and proof of the other registrant's receipt of your offer (such as a certified mail receipt). Your offer must, at a minimum, contain the following language or its equivalent:

[Your company name] offers to share in the burden of producing the data required pursuant to FIFRA sec. 3(c)(2)(B) in the [name of active ingredient] Registration Standard upon terms to be agreed or failing agreement to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii).

The remainder of your offer may not in any way attempt to limit this commitment. If the other registrant to whom your offer is made does not accept your offer, and if the other registrant informs us on a DCI Summary Sheet that he will develop and submit the data required under the DCI, then you may qualify for this option. In order for you to avoid suspension under this method, you may not later withdraw or limit your offer to share in the burden of developing the data. In addition, the other registrant must fulfill its commitment to develop and submit the data.

4. You request a waiver of the data requirement. If you believe that a data requirement does not (or should not) apply to your product or its uses, you must provide EPA with a statement of the reasons why you believe this is so. Your statement must address the specific composition or use factors that lead you to believe that a requirement does not apply. Since the Agency has carefully considered the composition and uses of pesticide products in determining that a data requirement applies, EPA does not anticipate that many waivers will be granted. A request for waiver does not extend the timeframes for developing required data, and if your waiver request is denied, your registration may be suspended if you fail to submit the data.

5. You request that EPA amend your registration by deleting the uses for which the data are needed. You are not required to submit data for uses which are no longer on your label.

6. You request voluntary cancellation of the registration of your product(s) for which the data are needed.

E. Procedures for requesting a change in testing protocol.

If you will generate the required data and plan to use test procedures which deviate from (or are not specified in) either EPA's Pesticide Assessment Guidelines or the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit for EPA approval the protocols you propose to use.

You should submit your protocols before beginning testing and await EPA approval, because the Agency will not ordinarily accept as sufficient studies using unapproved protocols. A request for protocol approval will not extend the timeframe for submission of the data, nor will extensions generally be given to conduct studies due to submittal of inappropriate protocols.

F. Procedures for requesting extensions of time.

If you think that you will need more time to generate the data than is allowed by EPA's schedule, you may submit a request for an extension of time. Any request for a time extension which is made as an initial response to a section 3(c)(2)(B) request notice must be submitted in writing to the Product Manager listed at the end of this section and must be made before the deadline for response. Once dates have been committed to and EPA has accepted these commitments, any subsequent requests for a time extension must be submitted in writing to the Office of Compliance Monitoring.

EPA will view failure to request an extension before the response deadline as a waiver of any future claim that there was insufficient time to submit the data. While EPA considers your request, you must strive to meet the deadline for submitting the data.

The extension request should state the reasons why you believe that an extension is necessary and the steps you have taken to meet the testing deadline. Time extensions normally will not be granted due to problems with laboratory capacity or adequacy of funding, since the Agency believes that with proper planning these can be overcome. Time extensions may be considered when joint data development is planned,

or when the Agency must approve a new or modified protocol before the study can be begun.

A request for an extension does not extend the timeframe for submission of the data. If EPA denies your request for a time extension and you do not submit the data as requested, EPA may begin proceedings to suspend the registrations of your products.

G. Existing stocks provision upon suspension or cancellation.

The Agency has determined that if a registration is suspended for failure to respond to a DCI request under FIFRA sec. 3(c)(2)(B), an existing stocks provision is not consistent with the Act. Accordingly, the Agency does not anticipate granting permission to sell or distribute existing stocks of suspended product except in rare circumstances. If you believe that your product will be suspended or cancelled and that an existing stocks provision should be granted, you have the burden of clearly demonstrating to EPA that granting such permission would be consistent with the Act. The following information must be included in any request for an existing stocks provision:

1. Explanation of why an existing stocks provision is necessary, including a statement of the quantity of existing stocks and your estimate of the time required for their sale or distribution; and
2. Demonstration that such a provision would be consistent with the provisions of FIFRA.

V. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Under the authority of section 3(c)(2)(B) of FIFRA, EPA has determined that certain product-specific data are required to maintain your registrations in effect. Product-specific data are derived from testing using a specific formulated product, and, unlike generic data, generally support only the registration of that product. All such data must be submitted by the dates specified in this Registration Standard.

If you have a manufacturing use product, these data are listed in Table B. As noted earlier, the Agency has decided that it will not routinely require product-specific data for end use products at this time.

In order to comply with the product specific data requirements, you must follow the same procedures as for generic data. See Section IV.D, E, F, and G. You should note, however, that product chemistry data are required for every product, and the only acceptable responses are options IV.D.1. (submit data) or IV.D.6. (cancellation of registration).

Failure to comply with the product-specific data requirements for your products will result in suspension of the product's registration.

VI. REQUIREMENT FOR SUBMISSION OF REVISED LABELING

FIFRA requires each product to be labeled with accurate, complete and sufficient instructions and precautions, reflecting the Agency's assessment of the data supporting the product and its uses. General labeling requirements are set out in 40 CFR 162.10 (see Appendix II - LABELING and SUMMARY). In addition, labeling requirements specific to products containing aluminum or magnesium phosphide are specified in Section II.F. of this Registration Standard. Applications submitted in response to this notice must include draft labeling for Agency review.

If you fail to submit revised labeling as required, which complies with 40 CFR 162.10 and the specific instructions in Section II.F., EPA may seek to cancel or suspend the registration of your product under FIFRA sec. 6.

VII. INSTRUCTIONS FOR SUBMISSION

A. Manufacturing Use Products (MUPs) containing Aluminum or Magnesium Phosphide as the sole active ingredient.

1. No later than October 31, 1986, you must submit to the Product Manager in the Registration Division for each product subject to this standard:

Three copies of draft labeling, including the container label and any associated supplemental labeling such as the applicator's manual. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft label must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text.

2. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division for each product subject to this Registration Standard:

a. The "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1), with appropriate attachments.¹

b. Confidential Statement of Formula (EPA Form 8570-4).

c. Formulator's Exemption Statement, if applicable.

d. Evidence of compliance with data compensation requirements of FIFRA sec. 3(c)(1)(D). Refer to 40 CFR 152.80-152.99.

3. Within 9 months from receipt of this document you must submit to the Product Manager:

a. Application for Pesticide Registration (EPA Form 8570-1).

¹ If on the Summary Sheet, you commit to develop the data, present arguments that a data requirement is not applicable or should be waived, or submit protocols or modified protocols for Agency review, you must submit a copy of the Summary Sheet (and any supporting information) to the Office of Compliance Monitoring, which will be monitoring the data generated in response to this notice. This submission is in addition to responding to the Product Manager, and should be submitted to the Office of Compliance Monitoring at the address given at the end of this section. (Actual studies are not to be submitted to the Office of Compliance Monitoring.)

b. Two copies of any required product-specific data (See Table B).

c. Product Specific Data Report.

4. After March 31, 1987 products registrants may not release for shipment or other persons may not distribute, sell, offer for sale, hold for sale, ship, deliver for shipment, or receive and (having so received) deliver or offer to deliver, to any person products subject to this Standard unless the product bears an Agency approved labeling which complies with the requirements of this standard.

5. Within the times set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

B. Manufacturing Use Products containing Aluminum or Magnesium Phosphide in combination with other active ingredients.

1. No later than October 31, 1986, you must submit to the Product Manager in the Registration Division for each product subject to this standard three copies of draft labeling as described in IX.A.1.

2. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division.

a. FIFRA sec. 3(c)(2)(B) Summary Sheet, with appropriate attachments (EPA Form 8580-1).

b. Confidential Statement of Formula (EPA Form 8570-4)

c. Formulator's Exemption Statement, if applicable.

3. After March 31, 1987 products registrants may not release for shipment or other persons may not distribute, sell, offer for sale, hold for sale, ship, deliver for shipment, or receive and (having so received) deliver or offer to deliver, to any person products subject to this Standard unless the product bears an Agency approved labeling which complies with the requirements of this standard.

4. Within the time frames set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

C. End Use Products containing Aluminum or Magnesium Phosphide alone or in combination with other active ingredients.

1. No later than October 31, 1986, you must submit to the Product Manager in the Registration Division for each product subject to this standard:

Three copies of draft labeling, including the container label and any associated supplemental labeling. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft labeling must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text. End use product labeling must comply specifically with the instructions in Section III.

2. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division:

a. FIFRA Section 3(c)(2)(B) Summary Sheet, with appropriate attachments (EPA Form 8580-1).

b. Confidential Statement of Formula (EPA Form 8570-4).

c. Formulator's Exemption Statement, if applicable.

3. After March 31, 1987 products registrants may not release for shipment or other persons may not distribute, sell, offer for sale, hold for sale, ship, deliver for shipment, or receive and (having so received) deliver or offer to deliver, to any person products subject to this Standard unless the product bears an Agency approved labeling which complies with the requirements of this standard.

D. Intrastate Products containing Aluminum or Magnesium Phosphide either as sole active ingredient or in combination with other active ingredients.

These products are being called in for full Federal registration. Producers of these products are being sent a letter instructing them how to submit an application for registration.

E. Addresses

The required information must be submitted to the following address:

Jeff Kempter, Acting PM-32
Registration Division (TS-767C)
Office of Pesticide Programs
Environmental Protection Agency
401 M St., SW
Washington, DC 20460

The address for submissions to the Office of Compliance Monitoring is:

Laboratory Data Integrity Program
Office of Compliance Monitoring (EN-342)
Environmental Protection Agency
401 M St., SW
Washington, DC 20460.

GUIDE TO TABLES

Tables A and B contain listings of data requirements for the pesticides covered by this Registration Standard.

Table A contains generic data requirements that apply to the pesticide in all products, including data requirements for which a "typical formulation" is the test substance.

Table B contains product-specific data requirements that apply only to a manufacturing use product.

The data tables are generally organized according to the following format:

1. Data Requirement (Column 1). The data requirements are listed in the order in which they appear in 40 CFR Part 158. The reference numbers accompanying each test refer to the test protocols set out in the Pesticide Assessment Guidelines, which are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
2. Test Substance (Column 2). This column lists the composition of the test substance required to be used for the test, as follows:

TGAI = Technical grade of the active ingredient
PAI = Pure active ingredient
PAIRA = Pure active ingredient, radio labeled
TEP = Typical end use formulation
MP = Manufacturing use product
EP = End use product

Any other test substances, such as metabolites, will be specifically named in Column 2 or in footnotes to the table.

3. Use pattern (Column 3). This column indicates the use patterns to which the data requirement applies. Use patterns are the same as those given in 40 CFR Part 158. The following letter designations are used for the given use patterns:

A = Terrestrial, food
B = Terrestrial, non-food
C = Aquatic, food
D = Aquatic, non-food
E = Greenhouse, food
F = Greenhouse, non-food
G = Forestry
H = Domestic outdoor
I = Indoor

Any other designations will be defined in a footnote to the table.

4. Does EPA have data? (Column 4). This column indicates one of three answers:

YES - EPA has data in its files that completely satisfy this data requirement. These data may be cited by other registrants in accordance with data compensation requirements of Part 152, Subpart E.

PARTIALLY - EPA has some data in its files, but such data do not fully satisfy the data requirement. In some cases, the Agency may possess data on one of two required species, or may possess data on one test substance but not all. The term may also indicate that the data available to EPA are incomplete. In this case, when the data are clarified, or additional details of the testing submitted by the original data submitter, the data may be determined to be acceptable. If this is the case, a footnote to the table will usually say so.

NO - EPA either possesses no data which are sufficient to fulfill the data requirement, or the data which EPA does possess are flawed scientifically in a manner that cannot be remedied by clarification or additional information.

5. Bibliographic citation (Column 5). If the Agency has acceptable data in its files, this column lists the identifying number of each study. This normally is the Master Record Identification (MRID) number, but may be a GS number if no MRID number has been assigned. Refer to the Bibliography Appendices for a complete citation of the study.

6. Must additional data be submitted? (Column 6). This column indicates whether the data must be submitted to the Agency. If column 3 indicates that the Agency already has data, this column will usually indicate NO. If column 3 indicates that the Agency has only partial data or no data, this column will usually indicate YES. In some cases, even though the Agency does not have the data, EPA will not require its submission because of the unique characteristics of the chemical; because data on another chemical can be used to fulfill the data requirement; or because the data requirement has been waived or reserved. Any such unusual situations will be explained in a footnote to the table.

7. Timeframe for submission (Column 7). If column 5 requires that data be submitted, this column indicates when the data are to be submitted, based on the issuance date of the Registration Standard. The timeframes are those established either as a result of a previous Data Call-In letter, or standardized timeframes established by PR Notice 85-5 (August 22, 1985).

8. Footnotes (at the end of each table). Self-explanatory.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ¹	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.120 Product Chemistry</u>						
<u>Product Identity</u>						
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	All		N/A	No ²	
61-3 - Discussion of Formation of Impurities	TGAI	All		N/A	No ²	
<u>Analysis and Certification of Product Ingredients</u>						
62-1 - Preliminary Analysis	TGAI	All		N/A	No ²	
<u>Physical and Chemical Characteristics</u>						
63-2 - Color	TGAI	All		N/A	No ²	
63-3 - Physical State	TGAI	All		N/A	No ²	
63-4 - Odor	TGAI	All		N/A	No ²	
63-5 - Melting Point	TGAI	All		N/A	No ²	
63-6 - Boiling Point	TGAI	All		N/A	No ²	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ¹	Must Additional Data be Submitted?	Time Frame for Submission
<u>§158.120 Product Chemistry (Continued)</u>						
<u>Physical and Chemical Characteristics (Continued)</u>						
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	All		N/A	No ²	
63-8 - Solubility	TGAI or PAI	All		N/A	No ²	
63-9 - Vapor Pressure	PAI	All		N/A	No ²	
63-10 - Dissociation constant	PAI	All		N/A	No ²	
63-11 - Octanol/water partition coefficient	PAI	All		N/A	No ²	
63-12 - pH	TGAI	All		N/A	No ²	
63-13 - Storage Stability	TGAI	All		N/A	No ²	
<u>Other Requirements:</u>						
64- 1 - Submittal of samples	TGAI, PAI	All		N/A	No ²	

- 1/ Not applicable. Although product chemistry data may be submitted in the past, the Agency has determined that these data must be resubmitted for each pesticide. New requirements have been introduced and previously submitted data must be updated. Therefore bibliographic citations for the old data are not applicable.
- 2/ There are currently no products which consist solely of the TGAI. This table is included in this standard to identify product chemistry data applicable to the TGAI for those who may wish to register it.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.125 Residue Chemistry</u>						
171-2 - Chemical Identity	TGAI	I/O	Yes		No	
171-3 - Directions for Use	—	I/O	Yes		No	
171-4 - Nature of Residue (Metabolism)						
- Plants	PAIRA	I/O	Yes	00005813, 00155684 05007621, 05008303 05008840, 05012115 05013027, 05015384 05018681, 05020467	No	
- Livestock	PAIRA & Plant Metabolites				No	
171-4 - Residue Analytical Method						
- Plant residues	TGAI & Metabolites	I/O	Yes	05007190, 05007724 05007845	No	
- Animal residues	TGAI & Metabolites				No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.125 Residue Chemistry</u>						
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use						
- Raw Agricultural Commodities		I/O	Yes	00005671, 00005685 00005686, 00005696 00005719, 00005750 00005767, 00005781 00005783, 00005905 00005935, 00006724 05007190, 05007830 05007845, 05012293 05013276, 05013439 05014054, 05015520 05016260, 05016893 05019407, 05020467 05020562, 05022032	No	
- Processed Foods and Feeds		I/O	Yes	00005696, 00005750 00005768, 00005774 00005775, 00005776 00005777, 00005786 00005905, 00005935 00020578, 00022007 00022008, 00022015 00022017, 00022026 00022913, 05007190 05012293, 05022032	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.125 Residue Chemistry - Continued</u>						
- Residue data following aeration of treated commodities		I/O	Yes	00005686, 00020578 00022017	No	
- Storage stability data for residues in commodities					No	
171-5 - Reduction of Residue	Residue of Concern		N/A			
171-6 - Proposed Tolerance	Residue of Concern		N/A			
171-7 - Reasonable Grounds in Support of Petition	--		N/A			
171-13 - Submittal of Analytical Reference Standards	PAIRA		N/A			

¹ I/O = Indoor and Outdoor

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.130 Environmental Fate</u>						
<u>DEGRADATION STUDIES-LAB:</u>						
161-1 - Hydrolysis	TGAI or PAIRA	I/O	Yes	00153943	No	
<u>Photodegradation</u>						
161-2 - In water	TGAI or PAIRA		No		No ²	
161-3 - On soil	TGAI or PAIRA		No		No ²	
161-4 - In Air	TGAI or PAIRA		No		No ²	
<u>METABOLISM STUDIES-LAB:</u>						
162-1 - Aerobic Soil	TGAI or PAIRA		No		No ²	
162-2 - Anaerobic Soil	TGAI or PAIRA		No		No ²	
162-3 - Anaerobic Aquatic	TGAI or PAIRA		No		No ²	
162-4 - Aerobic Aquatic	TGAI or PAIRA		No		No ²	
<u>MOBILITY STUDIES:</u>						
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA		No		No ²	
163-2 - Volatility (Lab)	TEP	I/O	Yes	00153943	No	
163-3 - Volatility (Field)	TEP		No		No ²	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.130 Environmental Fate - Continued</u>						
<u>DISSIPATION STUDIES-FIELD:</u>						
164-1 - Soil	TEP		No		No ²	
164-2 - Aquatic (Sediment)	TEP		No		No ²	
164-3 - Forestry	TEP		No		No ²	
164-4 - Combination and Tank Mixes			No		No ²	
164-5 - Soil, Long-term	TEP		No		No ²	
<u>ACCUMULATION STUDIES:</u>						
165-1 - Rotational Crops (Confined)	PAIRA		No		No ²	
165-2 - Rotational Crops (Field)	TEP		No		No ²	
165-3 - Irrigated Crops	TEP		No		No ²	
165-4 - In Fish	TGAI or PAIRA		No		No ²	
165-5 - In Aquatic Non-Target Organisms	TEP		No		No ²	

^{1/} I/O = Indoor and outdoor

^{2/} Because aluminum phosphide is a fumigant used primarily indoors, these data are not required.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE¹

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.150 Plant Protection¹</u>						
121-1 - <u>TARGET AREA PHYTOTOXICITY</u>	EP		No		No ¹	
<u>NONTARGET AREA PHYTOTOXICITY</u>						
<u>TIER I</u>						
122-1 - Seed Germination/ Seedling Emergence	TGAI		No		No ¹	
122-1 - Vegetative Vigor	TGAI		No		No ¹	
122-2 - Aquatic Plant Growth	TGAI		No		No ¹	
<u>TIER II</u>						
123-1 - Seed Germination/ Seedling Emergence	TGAI		No		No ¹	
123-1 - Vegetative Vigor	TGAI		No		No ¹	
123-2 - Aquatic Plant Growth	TGAI		No		No ¹	
<u>TIER III</u>						
124-1 - Terrestrial Field	TEP		No		No ¹	
124-2 - Aquatic Field	TEP		No		No ¹	

^{1/} Based on the use patterns of aluminum phosphide (enclosed space fumigation and rodent burrow fumigation), these data are not required.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern ¹	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.140 Reentry Protection</u>						
132-1 - Foliar Dissipation	TEP		N/A		No ²	
132-1 - Soil Dissipation	TEP		N/A		No ²	
133-3 - Dermal Exposure	TEP	I	No		Yes ³	15 Months
133-4 - Inhalation Exposure (special studies-- worker exposure)	TEP	I	No		Yes ³	15 Months

1/ I = Indoor

2/ Not applied by foliar or soil application.

3/ The Agency requires exposure data in order to determine whether any worker group is at significant risk when fumigating or handling any label-approved commodity with aluminum or magnesium phosphide.

A. Identifying and Describing Work-Related Activities and Providing Use-Related Information. A report must be submitted which traces treated commodities from the time of fumigation through avenues of commerce to the point where it is completely aerated (i.e., incapable of generating detectable levels of phosphine gas). This report must identify and describe in detail activities for which there is potential inhalation exposure of workers to phosphine gas. Furthermore, it must specify any potential for dermal exposure from application through avenues of commerce. The work related activities which must be included in the report include, but are not limited to: 1) application of fumigant to raw agricultural commodities, feed, processed and finished commodities; 2) work activities in which treated commodities are handled or transferred; and 3) any other work activities which may result in worker exposure to phosphine. All major sites are to be addressed. Examples include: 1) grain elevators, 2) food processing plants, 3) railroad cars, 4) on-farm storage bins and 5) tobacco warehouses. The report must estimate average hours per day and days per year that a worker is involved in each task where exposure may occur. If an individual typically performs more than one work activity, this must be described. The report must also include all available and relevant work logs; the estimates of work hours should be justified by reference to these logs. The type of clothing worn, including protective gear such as gloves or respirators, must be described in detail for each work activity. The number of individuals involved in each work activity must be estimated, again supported by work logs where possible.

B. Personal Exposure Monitoring. Within 15 months you are required to carry out a study of worker exposure to phosphine for all work activities where exposure is possible. Potential inhalation exposure during each activity described below must be measured using personal monitoring techniques approved by the Agency. Draeger tube or other fixed location technology will not obviate the need for personal monitoring. Monitoring must be done separately for each task, even if the same individual performs more than one task. Studies must be carried out according to EPA Pesticide Assessment Draft Guidelines, Subdivision U, Jan. 2, 1986, Applicator Exposure Monitoring. Protocols must be approved by the Agency prior to study initiation. Protocols must be submitted to EPA for approval prior to conduct of the studies. The protocols should contain a tentative sampling schedule and evidence that sufficient resources have been allocated to assure the proper conduct of the study. A final report will be due 15 months after receipt of this Notice.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Date Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted	Time Frame for Submission
<u>\$158.135 Toxicology</u>						
<u>ACUTE TESTING:</u>						
81-1 - Acute Oral Toxicity - Rat	TGAI		No		No ¹	
81-2 - Acute Dermal Toxicity - Rabbit	TGAI		No		No ¹	
81-3 - Acute Inhalation Toxicity - Rat	TGAI		Partial	05007354	No ¹	
81-7 - Delayed Neurotoxicity - Hen	TGAI		No		No ²	
<u>SUBCHRONIC TESTING:</u>						
82-1 - 90-Day Feeding: - Rodent, and - Non-rodent (Dog)	TGAI	All	No		Reserved ³	
82-2 - 21-Day Dermal - Rabbit	TGAI		No		Reserved ³	
82-3 - 90-Day Dermal - Rabbit	TGAI		No		No	
82-4 - 90-Day Inhalation: - Rat	TGAI	All	No		No	18 Months
82-5 - 90-Day Neurotoxicity: - Hen	TGAI		No		Yes ⁴	
-Mammal			No		No ²	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.135 Toxicology - Continued</u>						
<u>CHRONIC TESTING:</u>						
83-1 - Chronic Toxicity - 2 species: - Rhesus, and - Non-rodent (Dog)	TGAI	All	No		Reserved ³	
			No		Reserved ³	
83-2 - Oncogenicity - 2 species: - Rat (preferred), and - Mouse (preferred)	TGAI	All	No		Reserved ³	
			No		Reserved ³	
83-3 - Teratogenicity - 2 species: - Rat - Rabbit	TGAI	All	No		No	18 Months
			No		Yes ⁴	
83-4 - Reproduction - Rat 2-generation	TGAI	All	No		Reserved ³	
<u>MUTAGENICITY TESTING</u>						
84-2 - Gene Mutation (Ames Test)	TGAI	All	No		Yes ⁴	15 Months
84-2 - Structural Chromosomal Aberration	TGAI	All	No		Yes ⁴	15 Months
84-4 - Other Genotoxic Effects	TGAI	All	No		Yes ⁴	15 Months

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.135 Toxicology - Continued</u>						
<u>SPECIAL TESTING</u>						
85-1 - General Metabolism	PAI or PAIRA	All	No		Reserved ²	
85-2 - Dermal Penetration	Choice		No		No ⁵	
86-1 - Domestic Animal Safety	Choice		No		No ⁶	

- 1/ Applicants are not required to submit acute toxicity data for aluminum phosphide. See rationale on page 7 of this Standard.
- 2/ Aluminum phosphide is not a cholinesterase inhibitor.
- 3/ Reserved pending completion of the subchronic inhalation, teratogenicity and mutagenicity testing.
- 4/ Protocols must be submitted prior to the initiation of these studies. Good Laboratory Practices must be observed in accordance with 40 CFR 160.
- 5/ Aluminum phosphide is a solid.
- 6/ Not used in areas where pets or domestic animals are likely to be exposed.

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.145 Wildlife and Aquatic Organisms</u>						
<u>AVIAN AND MAMMALIAN TESTING</u>						
71-1 - Acute Avian Oral Toxicity	TGAI		No		No ¹	
71-2 - Avian Subacute Dietary Toxicity	TGAI		No		No ¹	
- Upland Game Bird, and					No ¹	
- Waterfowl					No ¹	
71-3 - Wild Mammal Toxicity	TGAI		No		No ¹	
71-4 - Avian Reproduction	TGAI		No		No ¹	
- Upland Game Bird, and					No ¹	
- Waterfowl					No ¹	
71-5 - Simulated Field Testing	TEP		No		No ¹	
- Mammals, and					No ¹	
- Birds					No ¹	
- Actual Field Testing	TEP		No		No ¹	
- Mammals, and					No ¹	
- Birds					No ¹	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.145 Wildlife and Aquatic Organisms - Continued</u>						
<u>AQUATIC ORGANISM TESTING</u>						
72-1 - Freshwater Fish Toxicity - Coldwater Fish Species, and - Warmwater Fish Species	TGAI		No		No ¹	
72-2 - Acute Toxicity to Freshwater Invertebrates	TGAI		No		No ¹	
72-3 - Acute Toxicity to Estuarine and Marine Organisms - Fish - Mollusk - Shrimp	TGAI		No		No ¹ No ¹ No ¹	
72-4 - Fish Early Life Stage, and - Aquatic Invertebrate Life-Cycle	TGAI		No		No ¹ No ¹	
72-5 - Fish - Life-Cycle	TGAI		No		No ¹	

TABLE A
GENERIC DATA REQUIREMENTS FOR ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.145 Wildlife and Aquatic Organisms - Continued</u>						
72-6 - Aquatic Organism Accumulation	TCAL, PAI OR Degradation Product		No			
- Crustacean					No ¹	
- Fish					No ¹	
- Insect Nymph					No ¹	
- Mollusk					No ¹	
72-7 - Simulated Field Testing	TEP		No		No ¹	
- Aquatic Organisms						
- Actual Field Testing					No ¹	
- Aquatic Organisms						

1/ Based on the use patterns of aluminum phosphide (enclosed space fumigation and rodent burrow fumigation) and the recognized high acute toxicity of phosphine, these data are not required.

TABLE C
PRODUCT SPECIFIC DATA REQUIREMENTS FOR END USE PRODUCTS CONTAINING ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation ¹	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.120 Product Chemistry</u>						
<u>Product Identity:</u>						
61-1 - Product Identity and Disclosure of Ingredients	EP	All	No	N/A	Yes	6 months
61-2 - Description of Beginning Materials and Manufacturing Process	EP	All	No	N/A	Yes	6 Months
61-3 - Discussion of Formation of Impurities	EP	All	No	N/A	Yes	6 Months
<u>Analysis and Certification of Product Ingredients</u>						
62-1 - Preliminary Analysis	EP	All	No	N/A	Yes	12 Months
62-2 - Certification of Limits	EP	All	No	N/A	Yes	12 Months
62-3 - Analytical Methods to Verify Certified Limit	EP	All	No	N/A	Yes	12 Months
<u>Physical and Chemical Characteristics</u>						
63-2 - Color	EP	All	No	N/A	Yes	6 Months
63-3 - Physical State	EP	All	No	N/A	Yes	6 Months
63-4 - Odor	EP	All	No	N/A	Yes	6 Months

TABLE C
PRODUCT SPECIFIC DATA REQUIREMENTS FOR END USE PRODUCTS CONTAINING ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation ¹	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.120 Product Chemistry (Continued)</u>						
<u>Physical and Chemical Characteristics (Continued)</u>						
63-7 - Density, Bulk Density, or Specific Gravity	EP	All	No	N/A	Yes	6 Months
63-12 - pH	EP	All	No	N/A	No ²	
63-14 - Oxidizing or Reducing Action	EP	All	No	N/A	Yes	6 Months
63-15 - Flammability	EP	All	No	N/A	Yes	6 Months
63-16 - Explodability	EP	All	No	N/A	Yes	6 Months
63-17 - Storage Stability	EP	All	No	N/A	Yes	15 Months
63-18 - Viscosity	EP	All	No	N/A	No ²	
63-19 - Miscibility	EP	All	No	N/A	No ²	
63-20 - Corrosion Characteristics	EP	All	No	N/A	No ²	
<u>Other Requirements:</u>						
64- 1 - Submittal of samples	EP	All	No	N/A	No	

- 1/ Not applicable. Although product chemistry data may have been submitted in the past, the Agency has determined that these data must be resubmitted for each manufacturing use product. New requirements have been introduced and previously submitted data must be updated. Therefore bibliographic citations for the old data are not applicable.
- 2/ Aluminum phosphide is a solid.

TABLE C
PRODUCT SPECIFIC DATA REQUIREMENTS FOR END USE PRODUCTS CONTAINING ALUMINUM AND MAGNESIUM PHOSPHIDE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
<u>\$158.135 Toxicology</u>						
<u>ACUTE TESTING</u>						
81-1 - Acute Oral Toxicity - Rat	EP		No		No ¹	
81-2 - Acute Dermal Toxicity - Rabbit	EP		No		No ¹	
81-3 - Acute Inhalation Toxicity - Rat	EP		Partial	05007354	No ¹	
81-4 - Primary Eye Irritation - Rabbit	EP		No		No ¹	
81-5 - Primary Dermal Irritation - Rabbit	EP		No		No ¹	
81-6 - Dermal Sensitization - Guinea Pig	EP		No		No ¹	

1/ The acute toxicity of aluminum phosphide and phosphine gas are well understood. Phosphine gas is highly toxic by inhalation.

LABEL CONTENTS

40 CFR 162.10 requires that certain specific labeling statements appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to the table at the end of this Appendix.

Item 1. **PRODUCT NAME** - The name, brand or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading.

Item 2. **COMPANY NAME AND ADDRESS** - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text.

Item 3. **NET CONTENTS** - A net contents statement is required on all labels or on the container of the pesticide. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be expressed in the largest suitable unit, e.g., "1 pound 10 ounces" rather than "26 ounces." In addition to English units, net contents may be expressed in metric units. [40 CFR 162.10(d)]

Item 4. **EPA REGISTRATION NUMBER** - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. [40 CFR 162.10(e)]

Item 5. **EPA ESTABLISHMENT NUMBER** - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment number on the immediate container cannot be clearly read through such wrapper or container. [40 CFR 162.10(f)]

Item 6A. **INGREDIENTS STATEMENT** - An ingredients statement is required on the front panel. The ingredients statement must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredients statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. [40 CFR 162.10(g)]

Item 6B. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - Front panel precautionary statements must be grouped together, preferably within a block outline. The table below shows the minimum type size requirements for various size labels.

<u>Size of Label on Front Panel in Square Inches</u>	<u>Signal Word Minimum Type Size All Capitals</u>	<u>"Keep Out of Reach of Children" Minimum Type Size</u>
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - The statement "Keep Out of Reach of Children" must be located on the front panel above the signal word except where contact with children during distribution or use is unlikely. [40 CFR 162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (DANGER, WARNING, or CAUTION) is required on the front panel immediately below the child hazard warning statement. [40 CFR 162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, dermal, or inhalation toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word POISON. [40 CFR 162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. [40 CFR 162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. [40 CFR 162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. [40 CFR 162.10(h)(2)].

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. [40 CFR 162.10(h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. [40 CFR 162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD - FLAMMABILITY
Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in the PHYS/CHEM Labeling Appendix. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

Item 9A. RESTRICTED USE CLASSIFICATION - FIFRA sec. 3(d) requires that all pesticide formulations/uses be classified for either general or restricted use. Products classified for restricted use may be limited to use by certified applicators or persons under their direct supervision (or may be subject to other restrictions that may be imposed by regulation).

In the Registration Standard, the Agency has (1) indicated certain formulations/uses are to be restricted (Section IV indicates why the product has been classified for restricted use); or (2) reserved any classification decision until appropriate data are submitted.

The Regulatory Position and Rationale states whether products containing this active ingredient are classified for restricted use. If they are restricted the draft label(s) submitted to the Agency as part of your application must reflect this determination (see below).

If you do not believe that your product should be classified for restricted use, you must submit any information and rationale with your application for reregistration. During the Agency's review of your application, your proposed classification determination will be evaluated in accordance with the provisions of 40 CFR 162.11(c). You will be notified of the Agency's classification decision.

Classification Labeling Requirements

If your product has been classified for restricted use, the following label requirements apply:

1. All uses restricted.

a. The statement "Restricted Use Pesticide" must appear at the top of the front panel of the label. The statement must be set in type of the same minimum size as required for human hazard signal word (see table in 40 CFR 162.10(h)(1)(iv))

b. Directly below this statement on the front panel, a summary statement of the terms of restriction must appear (including the reasons for restriction if specified in Section I). If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification."

2. Some but not all uses restricted. If the Regulatory Position and Rationale states that some uses are classified for restricted use, and some are unclassified, several courses of action are available:

a. You may label the product for Restricted use. If you do so, you may include on the label uses that are unrestricted, but you may not distinguish them on the label as being unrestricted.

b. You may delete all restricted uses from your label and submit draft labeling bearing only unrestricted uses.

c. You may "split" your registration, i.e., register two separate products with identical formulations, one bearing only unrestricted uses, and the other bearing restricted uses. To do so, submit two applications for reregistration, each containing all forms and necessary labels. Both applications should be submitted simultaneously. Note that the products will be assigned separate registration numbers.

Item 9B. MISUSE STATEMENT - All products must bear the misuse statement, "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." This statement appears at the beginning of the directions for use, directly beneath the heading of that section.

Item 10A. REENTRY STATEMENT - If a reentry interval has been established by the Agency, it must be included on the label. Additional worker protection statements may be required in accordance with PR Notice 83-2, March 29, 1983.

Item 10B. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix II, STOR, PEST/DIS, and CONT/DIS to determine the storage and disposal instructions appropriate for your products.

Item 10C. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment.
[40 CFR 162.10]

COLLATERAL LABELING

Bulletins, leaflets, circulars, brochures, data sheets, flyers, or other written or graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .,"
3	Net contents	All products	None	Bottom front panel or end of label text	"Distributed by . . .," etc. May be in metric units in addition to U.S. units
4	EPA Reg. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Est. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. at/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked. Note type size requirements.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & crossbones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of Practical Treatment or First Aid	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	Refer to Appendix II guide PHYS/CHEM
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9B	Misuse statement	All products	Immediately following heading of directions for use		Required statement is: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."
10A	Reentry statement	PR Notice 83-2 or as determined by the Agency	In the directions for use	Immediately after misuse statement	
10B	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from other directions for use. Refer to Appendix II guides STOR, CONT/DIS, and PEST/DIS for further information and required statements.
10C	Directions for use	All products	None	None	May be in metric as well as U.S. units

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§ 162.10 Labeling requirements.

(a) *General*—(1) *Contents of the label.* Every pesticide products shall bear a label containing the information specified by the Act and the regulations in this Part. The contents of a label must show clearly and prominently the following:

(i) The name, brand, or trademark under which the product is sold as prescribed in paragraph (b) of this section;

(ii) The name and address of the producer, registrant, or person for

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whom produced as prescribed in paragraph (c) of this section:

(iii) The net contents as prescribed in paragraph (d) of this section;

(iv) The product registration number as prescribed in paragraph (e) of this section;

(v) The producing establishment number as prescribed in paragraph (f) of this section;

(vi) An ingredient statement as prescribed in paragraph (g) of this section;

(vii) Warning or precautionary statements as prescribed in paragraph (h) of this section;

(viii) The directions for use as prescribed in paragraph (i) of this section; and

(ix) The use classification(s) as prescribed in paragraph (j) of this section.

(2) *Prominence and legibility.* (i) All words, statements, graphic representations, designs or other information required on the labeling by the Act or the regulations in this part must be clearly legible to a person with normal vision, and must be placed with such conspicuousness (as compared with other words, statements, designs, or graphic matter on the labeling) and expressed in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use.

(ii) All required label text must:

(A) Be set in 6-point or larger type;

(B) Appear on a clear contrasting background; and

(C) Not be obscured or crowded.

(3) *Language to be used.* All required label or labeling text shall appear in the English language. However, the Agency may require or the applicant may propose additional text in other languages as is considered necessary to protect the public. When additional text in another language is necessary, all labeling requirements will be applied equally to both the English and other-language versions of the labeling.

(4) *Placement of Label—(i) General.* The label shall appear on or be securely attached to the immediate container of the pesticide product. For purposes of this Section, and the misbranding provisions of the Act, "securely attached" shall mean that a

label can reasonably be expected to remain affixed during the foreseeable conditions and period of use. If the immediate container is enclosed within a wrapper or outside container through which the label cannot be clearly read, the label must also be securely attached to such outside wrapper or container, if it is a part of the package as customarily distributed or sold.

(ii) *Tank cars and other bulk containers—(A) Transportation.* While a pesticide product is in transit, the appropriate provisions of 49 CFR Parts 170-189, concerning the transportation of hazardous materials, and specifically those provisions concerning the labeling, marking and placarding of hazardous materials and the vehicles carrying them, define the basic Federal requirements. In addition, when any registered pesticide product is transported in a tank car, tank truck or other mobile or portable bulk container, a copy of the accepted label must be attached to the shipping papers, and left with the consignee at the time of delivery.

(B) *Storage.* When pesticide products are stored in bulk containers, whether mobile or stationary, which remain in the custody of the user, a copy of the label of labeling, including all appropriate directions for use, shall be securely attached to the container in the immediate vicinity of the discharge control valve.

(5) *False or misleading statements.* Pursuant to section 2(q)(1)(A) of the Act, a pesticide or a device declared subject to the Act pursuant to § 162.15, is misbranded if its labeling is false or misleading in any particular including both pesticidal and non-pesticidal claims. Examples of statements or representations in the labeling which constitute misbranding include:

(i) A false or misleading statement concerning the composition of the product;

(ii) A false or misleading statement concerning the effectiveness of the product as a pesticide or device;

(iii) A false or misleading statement about the value of the product for purposes other than as a pesticide or device;

(iv) A false or misleading comparison with other pesticides or devices;



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(v) Any statement directly or indirectly implying that the pesticide or device is recommended or endorsed by any agency of the Federal Government;

(vi) The name of a pesticide which contains two or more principal active ingredients if the name suggests one or more but not all such principal active ingredients even though the names of the other ingredients are stated elsewhere in the labeling;

(vii) A true statement used in such a way as to give a false or misleading impression to the purchaser;

(viii) Label disclaimers which negate or detract from labeling statements required under the Act and these regulations;

(ix) Claims as to the safety of the pesticide or its ingredients, including statements such as "safe," "nonpoisonous," "noninjurious," "harmless" or "nontoxic to humans and pets" with or without such a qualifying phrase as "when used as directed"; and

(x) Non-numerical and/or comparative statements on the safety of the product, including but not limited to:

(A) "Contains all natural ingredients";

(B) "Among the least toxic chemicals known"

(C) "Pollution approved"

(6) *Final printed labeling.* (i) Except as provided in paragraph (a)(5)(ii) of this section, final printed labeling must be submitted and accepted prior to registration. However, final printed labeling need not be submitted until draft label texts have been provisionally accepted by the Agency.

(ii) Clearly legible reproductions or photo reductions will be accepted for unusual labels such as those silk-screened directly onto glass or metal containers or large bag or drum labels. Such reproductions must be of microfilm reproduction quality.

(b) *Name, brand, or trademark.* (1) The name, brand, or trademark under which the pesticide product is sold shall appear on the front panel of the label.

(2) No name, brand, or trademark may appear on the label which:

(i) Is false or misleading, or

(ii) Has not been approved by the Administrator through registration or

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supplemental registration as an additional name pursuant to § 162.6(b)(4).

(c) *Name and address of producer, registrant, or person for whom produced.* An unqualified name and address given on the label shall be considered as the name and address of the producer. If the registrant's name appears on the label and the registrant is not the producer, or if the name of the person for whom the pesticide was produced appears on the label, it must be qualified by appropriate wording such as "Packed for . . ." "Distributed by . . ." or "Sold by . . ." to show that the name is not that of the producer.

(d) *Net weight or measure of contents.* (1) The net weight or measure of content shall be exclusive of wrappers or other materials and shall be the average content unless explicitly stated as a minimum quantity.

(2) If the pesticide is a liquid, the net content statement shall be in terms of liquid measure at 68° F (20°C) and shall be expressed in conventional American units of fluid ounces, pints, quarts, and gallons.

(3) If the pesticide is solid or semi-solid, viscous or pressurized, or is a mixture of liquid and solid, the net content statement shall be in terms of weight expressed as avoirdupois pounds and ounces.

(4) In all cases, net content shall be stated in terms of the largest suitable units, i.e., "1 pound 10 ounces" rather than "26 ounces."

(5) In addition to the required units specified, net content may be expressed in metric units.

(6) Variation above minimum content or around an average is permissible only to the extent that it represents deviation unavoidable in good manufacturing practice. Variation below a stated minimum is not permitted. In no case shall the average content of the packages in a shipment fall below the stated average content.

(e) *Product registration number.* The registration number assigned to the pesticide product at the time of registration shall appear on the label, preceded by the phrase "EPA Registration No.," or the phrase "EPA Reg. No." The registration number shall be set in type of a size and style similar to

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other print on that part of the label on which it appears and shall run parallel to it. The registration number and the required identifying phrase shall not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency.

(f) *Producing establishments registration number.* The producing establishment registration number preceded by the phrase "EPA Est.", of the final establishment at which the product was produced may appear in any suitable location on the label or immediate container. It must appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container.

(g) *Ingredient statement—(1) General.* The label of each pesticide product must bear a statement which contains the name and percentage by weight of each active ingredient, the total percentage by weight of all inert ingredients; and if the pesticide contains arsenic in any form, a statement of the percentages of total and water-soluble arsenic calculated as elemental arsenic. The active ingredients must be designated by the term "active ingredients" and the inert ingredients by the term "inert ingredients," or the singular forms of these terms when appropriate. Both terms shall be in the same type size, be aligned to the same margin and be equally prominent. The statement "Inert Ingredients, none" is not required for pesticides which contain 100 percent active ingredients. Unless the ingredient statement is a complete analysis of the pesticide, the term "analysis" shall not be used as a heading for the ingredient statement.

(2) *Position of ingredient statement.*

(i) The ingredient statement is normally required on the front panel of the label. If there is an outside container or wrapper through which the ingredient statement cannot be clearly read, the ingredient statement must also appear on such outside container or wrapper. If the size or form of the package makes it impracticable to place the ingredient statement on the front panel of the label, permission

may be granted for the ingredient statement to appear elsewhere.

(ii) The text of the ingredient statement must run parallel with other text on the panel on which it appears, and must be clearly distinguishable from and must not be placed in the body of other text.

(3) *Names to be used in ingredient statement.* The name used for each ingredient shall be the accepted common name, if there is one, followed by the chemical name. The common name may be used alone only if it is well known. If no common name has been established, the chemical name alone shall be used. In no case will the use of a trademark or proprietary name be permitted unless such name has been accepted as a common name by the Administrator under the authority of Section 25(c)(6).

(4) *Statements of percentages.* The percentages of ingredients shall be stated in terms of weight-to-weight. The sum of percentages of the active and the inert ingredients shall be 100. Percentages shall not be expressed by a range of values such as "22-25%." If the uses of the pesticide product are expressed as weight of active ingredient per unit area, a statement of the weight of active ingredient per unit volume of the pesticide formulation shall also appear in the ingredient statement.

(5) *Accuracy of stated percentages.* The percentages given shall be as precise as possible reflecting good manufacturing practice. If there may be unavoidable variation between manufacturing batches, the value stated for each active ingredient shall be the lowest percentage which may be present.

(6) *Deterioration.* Pesticides which change in chemical composition significantly must meet the following labeling requirements:

(i) In cases where it is determined that a pesticide formulation changes chemical composition significantly, the product must bear the following statement in a prominent position on the label: "Not for sale or use after [date]."

(ii) The product must meet all label claims up to the expiration time indicated on the label.

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(7) *Inert ingredients.* The Administrator may require the name of any inert ingredient(s) to be listed in the ingredient statement if he determines that such ingredient(s) may pose a hazard to man or the environment.

(h) *Warnings and precautionary statements.* Required warnings and precautionary statements concerning the general areas of toxicological hazard including hazard to children, environmental hazard, and physical or chemical hazard fall into two groups: those required on the front panel of

the labeling and those which may appear elsewhere. Specific requirements concerning content, placement, type size, and prominence are given below.

(1) *Required front panel statements.* With the exception of the child hazard warning statement, the text required on the front panel of the label is determined by the Toxicity Category of the pesticide. The category is assigned on the basis of the highest hazard shown by any of the indicators in the table below:

Hazard indicators	Toxicity categories			
	I	II	III	IV
Oral LD ₅₀	Up to and including 50 mg/kg.	From 50 thru 500 mg/kg.	From 500 thru 5000 mg/kg.	Greater than 5000 mg/kg.
Inhalation LC ₅₀	Up to and including .2 mg/liter.	From .2 thru 2 mg/liter.	From 2 thru 20 mg/liter.	Greater than 20 mg/liter.
Dermal LD ₅₀	Up to and including 200 mg/kg.	From 200 thru 2000	From 2,000 thru 20,000	Greater than 20,000
Eye effects	Corneal opacity, corneal opacity not reversible within 7 days.	Corneal opacity reversible within 7 days, emission persisting for 7 days.	No corneal opacity, emission reversible within 7 days.	No emission.
Skin effects	Corrosive	Severe emission at 72 hours.	Moderate emission at 72 hours.	Mild or slight emission at 72 hours.

(1) *Human hazard signal word—(A) Toxicity Category I.* All pesticide products meeting the criteria of Toxicity Category I shall bear on the front panel the signal word "Danger." In addition if the product was assigned to Toxicity Category I on the basis of its oral, inhalation or dermal toxicity (as distinct from skin and eye local effects) the word "Poison" shall appear in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word "poison."

(B) *Toxicity Category II.* All pesticide products meeting the criteria of Toxicity Category II shall bear on the front panel the signal word "Warning."

(C) *Toxicity Category III.* All pesticide products meeting the criteria of Toxicity Category III shall bear on the front panel the signal word "Caution."

(D) *Toxicity Category IV.* All pesticide products meeting the criteria of Toxicity Category IV shall bear on the front panel the signal word "Caution."

(E) *Use of signal words.* Use of any signal word(s) associated with a higher Toxicity Category is not permitted except when the Agency determines that such labeling is necessary to prevent unreasonable adverse effects on man or the environment. In no case shall more than one human hazard signal word appear on the front panel of a label.

(1) *Child hazard warning.* Every pesticide product label shall bear on the front panel the statement "keep out of reach of children." Only in cases where the likelihood of contact with children during distribution, marketing, storage or use is demonstrated by the applicant to be extremely remote, or if the nature of the pesticide is such that it is approved for use on infants or small children, may the Administrator waive this requirement.

(11) *Statement of practical treatment—(A) Toxicity Category I.* A statement of practical treatment (first aid or other) shall appear on the front panel of the label of all pesticides falling into Toxicity Category I on the



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basis of oral, inhalation or dermal toxicity. The Agency may, however, permit reasonable variations in the placement of the statement of practical treatment is some reference such as "See statement of practical treatment on back panel" appears on the front panel near the word "Poison" and the skull and crossbones.

(B) *Other toxicity categories.* The statement of practical treatment is not required on the front panel except as described in paragraph (hX1)(iii)(A) of this section. The applicant may, however, include such a front panel statement at his option. Statements of practical treatment are, however, required elsewhere on the label in accord with paragraph (hX2) of this section if they do not appear on the front panel.

(iv) *Placement and prominence.* All the require front panel warning statements shall be grouped together on the label, and shall appear with sufficient prominence relative to other front panel text and graphic material to make them unlikely to be overlooked under customary conditions of purchase and use. The following table shows the minimum type size requirements for the front panel warning statements on various sizes of labels:

Size of label front panel in square inches	Points	
	Required signal word, all capitals	"Keep out of reach of Children"
5 and under	8	8
Above 5 to 10	10	8
Above 10 to 15	12	8
Above 15 to 30	14	10
Over 30	18	12

(2) *Other required warnings and precautionary statements.* The warnings and precautionary statements as required below shall appear together on the label under the general heading "Precautionary Statements" and under appropriate subheadings of "Hazard to Humans and Domestic Animals," "Environmental Hazard" and "Physical or Chemical Hazard."

(i) *Hazard to humans and domestic animals.* (A) Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. The precautionary paragraph shall be immediately preceded by the appropriate hazard signal word.

(B) The following table depicts typical precautionary statements. These statements must be modified or expanded to reflect specific hazards.

Toxicity category	Precautionary statements by toxicity category	
	Oral, inhalation, or dermal toxicity	Skin and eye local effects
I	Fatal (poisonous) if swallowed (inhaled or absorbed through skin). Do not breathe vapor (dust or spray mist). Do not get in eyes, on skin, or on clothing. (Front panel statement of practical treatment required.)	Corrosive, causes eye and skin damage by skin emission. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or toxic if swallowed. (Appropriate first aid statement required.)
II	May be fatal if swallowed (inhaled or absorbed through the skin). Do not breathe vapors (dust or spray mist). Do not get in eyes, on skin, or on clothing. (Appropriate first aid statements required.)	Causes eye (and skin) irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. (Appropriate first aid statement required.)
III	Harmful if swallowed (inhaled or absorbed through the skin). Avoid breathing vapors (dust or spray mist). Avoid contact with skin (eyes or clothing). (Appropriate first aid statement required.)	Avoid contact with skin, eyes or clothing. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.
IV	(No precautionary statements required.)	(No precautionary statements required.)

(ii) *Environmental hazards.* Where a hazard exists to non target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the

hazard and the appropriate precautions to avoid potential accident, injury or damage. Examples of the hazard statements and the circum-

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stances under which they are required follow:

(A) If a pesticide intended for outdoor use contains an active ingredient with a mammalian acute oral LD₅₀ of 100 or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(B) If a pesticide intended for outdoor use contains an active ingredient with a fish acute LC₅₀ of 1 ppm or less, the statement "This Pesticide is Toxic to Fish" is required.

(C) If a pesticide intended for outdoor use contains an active ingredient with an avian acute oral LD₅₀ of 100 mg/kg or less, or a subacute dietary LC₅₀ of 500 ppm or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(D) If either accident history or field studies demonstrate that use of the

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pesticide may result in fatality to birds, fish or mammals, the statement "This pesticide is extremely toxic to wildlife (fish)" is required.

(E) For uses involving foliar application to agricultural crops, forests, or shade trees, or for mosquito abatement treatments, pesticides toxic to pollinating insects must bear appropriate label cautions.

(F) For all outdoor uses other than aquatic applications the label must bear the caution "Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment or disposal of wastes."

(iii) *Physical or chemical hazards.* Warning statements on the flammability or explosive characteristics of the pesticide are required as follows:

Pest part	Required text
(A) PRESSURIZED CONTAINERS	
Pest part at or below 20° F. if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause burning.
Pest part above 20° F and not over 90° F or if the same extension is more than 18 in long at a distance of 6 in from the flame.	Flammable. Contents under pressure. Keep away from heat, sparks, and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause burning.
All other pressurized containers.	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause burning.
(B) NONPRESSURIZED CONTAINERS	
At or below 20° F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
Above 20° F and not over 90° F.	Flammable. Keep away from heat and open flame.
Above 90° F and not over 150° F.	Do not use or store near heat or open flame.

(i) *Directions for Use—(1) General requirements—(i) Adequacy and clarity of directions.* Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment.

(ii) *Placement of directions for use.* Directions may appear on any portion of the label provided that they are conspicuous enough to be easily read by the user of the pesticide product. Directions for use may appear on

printed or graphic matter which accompanies the pesticide provided that:

(A) If required by the Agency, such printed or graphic matter is securely attached to each package of the pesticide, or placed within the outside wrapper or bag;

(B) The label bears a reference to the directions for use in accompanying leaflets or circulars, such as "See directions in the enclosed circular;" and

(C) The Administrator determines that it is not necessary for such directions to appear on the label.

(iii) *Exceptions to requirement for direction for use—(A)* Detailed directions for use may be omitted from labeling of pesticides which are intended



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for use only by manufacturers of products other than pesticide products in their regular manufacturing processes, provided that:

(1) The label clearly shows that the product is intended for use only in manufacturing processes and specifies the type(s) of products involved.

(2) Adequate information such as technical data sheets or bulletins, is available to the trade specifying the type of product involved and its proper use in manufacturing processes.

(3) The product will not come into the hands of the general public except after incorporation into finished products; and

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

(B) Detailed directions for use may be omitted from the labeling of pesticide products for which sale is limited to physicians, veterinarians, or druggists, provided that:

(1) The label clearly states that the product is for use only by physicians or veterinarians;

(2) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment; and

(3) The product is also a drug and regulated under the provisions of the Federal Food, Drug and Cosmetic Act.

(C) Detailed directions for use may be omitted from the labeling of pesticide products which are intended for use only by formulators in preparing pesticides for sale to the public, provided that:

(1) There is information readily available to the formulators on the composition, toxicity, methods of use, applicable restrictions or limitations, and effectiveness of the product for pesticide purposes;

(2) The label clearly states that the product is intended for use only in manufacturing, formulating, mixing, or repackaging for use as a pesticide and specifies the type(s) of pesticide products involved;

(3) The product as finally manufactured, formulated, mixed, or repackaged is registered; and

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

(2) *Contents of Directions for Use.* The directions for use shall include the following, under the headings "Directions for Use":

(i) The statement of use classification as prescribed in 162.10(j) immediately under the heading "Directions for Use."

(ii) Immediately below the statement of use classification, the statement "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."

(iii) The site(s) of application, as for example the crops, animals, areas, or objects to be treated.

(iv) The target pest(s) associated with each site.

(v) The dosage rate associated with each site and pest.

(vi) The method of application, including instructions for dilution, if required, and type(s) of application apparatus or equipment required.

(vii) The frequency and timing of applications necessary to obtain effective results without causing unreasonable adverse effects on the environment.

(viii) Specific limitations on reentry to areas where the pesticide has been applied, meeting the requirements concerning reentry provided by 40 CFR Part 170.

(ix) Specific directions concerning the storage and disposal of the pesticide and its container, meeting the requirements of 40 CFR Part 165. These instructions shall be grouped and appear under the heading "Storage and Disposal." This heading must be set in type of the same minimum sizes as required for the child hazard warning (See Table in § 162.10(h)(1)(iv).)

(x) Any limitations or restrictions on use required to prevent unreasonable adverse effects, such as:

(A) Required intervals between application and harvest of food or feed crops.

(B) Rotational crop restrictions.

(C) Warnings as required against use on certain crops, animals, objects, or in or adjacent to certain areas.

(D) [Reserved]

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(E) For restricted use pesticides, a statement that the pesticide may be applied under the direct supervision of a certified applicator who is not physically present at the site of application but nonetheless available to the person applying the pesticide, unless the Agency has determined that the pesticide may only be applied under the direct supervision of a certified applicator who is physically present.

(F) Other pertinent information which the Administrator determines to be necessary for the protection of man and the environment.

(J) *Statement of Use Classification.* By October 22, 1976, all pesticide products must bear on their labels a statement of use classification as described in paragraphs (j)(1) and (2) of this section. Any pesticide product for which some uses are classified for general use and others for restricted use shall be separately labeled according to the labeling standards set forth in this subsection, and shall be marketed as separate products with different registration numbers, one bearing directions only for general use(s) and the other bearing directions for restricted use(s) except that, if a product has both restricted use(s) and general use(s), both of these uses may appear on a product labeled for restricted use. Such products shall be subject to the provisions of § 162.10(j)(2).

(1) *General Use Classification.* Pesticide products bearing directions for use(s) classified general shall be labeled with the exact words "General Classification" immediately below the heading "Directions for Use." And reference to the general classification that suggests or implies that the general utility of the pesticide extends beyond those purposes and uses contained in the Directions for Use will be considered a false or misleading statement under the statutory definitions of misbranding.

(2) *Restricted Use Classification.* Pesticide products bearing direction for use(s) classified restricted shall bear statements of restricted use classification on the front panel as described below:

(i) *Front panel statement of restricted use classification.* (A) At the top of the front panel of the label, set in type

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of the same minimum sizes as required for human hazard signal words (see table in § 162.10(h)(1)(iv)), and appearing with sufficient prominence relative to other text and graphic material on the front panel to make it unlikely to be overlooked under customary conditions of purchase and use, the statement "Restricted Use Pesticide" shall appear.

(B) Directly below this statement on the front panel, a summary statement of the terms of restriction imposed as a precondition to registration shall appear. If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification." If, however, other regulatory restrictions are imposed, the Administrator will define the appropriate wording for the terms of restriction by regulation.

(k) Advertising. [Reserved]

[40 FR 38268, July 3, 1975; 40 FR 32329, Aug. 1, 1975; 40 FR 36571, Aug. 21, 1975, as amended at 43 FR 8786, Feb. 9, 1978]

PHYSICAL/CHEMICAL HAZARDSCriteriaRequired Label Statement

I. Pressurized Containers

- A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.

Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

- B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.

Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

- C. All Other Pressurized Containers

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

II. Non-Pressurized Containers

- A. Flashpoint at or below 20°F.

Extremely flammable. Keep away from fire, sparks, and heated surfaces.

- B. Flashpoint above 20°F and not over 80°F.

Flammable. Keep away from heat and open flame.

- C. Flashpoint over 80°F and not over 150°F.

Do not use or store near heat and open flame.

- D. Flashpoint above 150°F.

None required.

STORAGE INSTRUCTIONS FOR PESTICIDES

Heading:

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL."

Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.
2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.
3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.
4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.
5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.
6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

PESTICIDE DISPOSAL INSTRUCTIONS

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients that are Acute Hazardous Wastes (see list in this Appendix) or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

"Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

3. The labels of all products, except those intended for domestic use, containing active or inert ingredients that are Toxic Hazardous Wastes (see list in this Appendix) or meet any of the criteria in 40 CFR 261, Subpart C for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

4. Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

5. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

CONTAINER DISPOSAL INSTRUCTIONS

The label of each product must bear container disposal instructions appropriate to the type of container.

1. Domestic use products must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. All other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused ¹ , dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording)

¹/ Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

GUIDE TO USE OF THIS BIBLIOGRAPHY

1. **CONTENT OF BIBLIOGRAPHY.** This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.
2. **UNITS OF ENTRY.** The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.
3. **IDENTIFICATION OF ENTRIES.** The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies; see paragraph 4(d)(4) below for a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier number is also to be used whenever specific reference is needed.
4. **FORM OF ENTRY.** In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

- a. Author. Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.
- b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.
- c. Title. In some cases, it has been necessary for Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.
- d. Trailing Parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:
 - (1) Submission Date. The date of the earliest known submission appears immediately following the word "received."
 - (2) Administrative Number. The next element, immediately following the word "under," is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.
 - (3) Submitter. The third element is the submitter, following the phrase "submitted by." When authorship is defaulted to the submitter, this element is omitted.
 - (4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," standing for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

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FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET		EPA REGISTRATION NO.
PRODUCT NAME		
APPLICANT'S NAME		DATE GUIDANCE DOCUMENT ISSUED
With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:		
☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:		
☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:		
NAME OF OTHER REGISTRANT		
☐ 3. I enclose a completed "Certification of Attempt to Enter into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:		
☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):		
☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)		
REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

**CERTIFICATION OF ATTEMPT TO ENTER
INTO AN AGREEMENT WITH OTHER REGISTRANTS
FOR DEVELOPMENT OF DATA**

(To qualify, certify ALL four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:	GUIDANCE DOCUMENT DATE
	ACTIVE INGREDIENT
NAME OF FIRM	EPA COMPANY NUMBER

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

NAME OF FIRM	DATE OF OFFER

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

SIGNATURE

DATE

PRODUCT SPECIFIC DATA REPORT

EPA Reg. No. _____ Date _____

Guidance Document for _____

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submit- ting Data (At- tached)	
\$158.120 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk- density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submit- ting Data (At- tached)	
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric break- down voltage				
\$158.135					
TOXICOLOGY					
81-1	Acute oral toxicity, rat				
81-2	Acute dermal toxicity, rabbit				
81-3	Acute inhalation, toxicity, rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitiza- tion				

EPA Index to Pesticide Chemicals

c066501

ALUMINUM PHOSPHIDE

TYPE PESTICIDE: Insect FumigantFORMULATIONS: D (57%); P/T (55%, 57%, 60%)

+

GENERAL WARNINGS AND LIMITATIONS: Restricted use pesticide. When aluminum phosphide comes in contact with water or other liquids, flammable and poisonous phosphine gas (hydrogen phosphide) is produced. Spontaneous heating and combustion may occur, especially if aluminum phosphide is piled in 1 location. Wear gloves when handling. Do not breathe vapor or dust. Users should have available full-face gas masks with canisters that are approved for phosphine protection. Users should also have gas detection equipment designed specifically for phosphine. Phosphine reacts with copper, brass, gold, silver, and other precious metals. Electrical equipment, undeveloped film, certain types of copying paper, and other materials containing these metals should be removed from structures to be fumigated or protected from phosphine. Some protection may be afforded by wrapping materials in heavy polyethylene film, and electrical contact points can be coated with petroleum jelly. Make structures and transportation vehicles being fumigated as gastight as possible to provide safe and effective fumigation. Seal all doors, windows, vents, and other openings and cracks, except for the opening being used to enter and leave. Use suitable sealers such as masking tape, caulking compound, and polyethylene film to achieve a tight seal. After applying fumigant, vacate structure or transportation vehicle and lock entryway. Phosphine is capable of penetrating a wide variety of dense and seemingly gastight materials, such as masonry block walls and poorly constructed wood structures. Dosages are dependent upon how well the structure to be fumigated is sealed and also upon adverse conditions, such as high winds. Higher dosages are for poorly sealed structures or adverse weather conditions. Higher dosages should also be used if rice weevil is present. Post danger signs at all possible entrances to fumigated structures and transportation vehicles. Information on danger signs on structures should follow manufacturer's recommendations and those on transportation vehicles should read as per Department of Transportation requirements. Do not subdivide prepackaged pellets or tablets. Once a container of bagged aluminum phosphide is opened, all bags must be used. Bags cannot be saved for future use. Fumigated foods should be allowed to aerate for at least 48 hours before being offered to consumers. Do not fumigate at temperatures below 40 F (4.4 C).

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>AGRICULTURAL PREMISES AND EQUIPMENT</u>		
<u>(Animal Buildings, Equipment and Outdoor Areas For Other Than Dairy, Poultry and Pets)</u>		
/6100800	<u>Beehives (Empty)</u>	N.F.
@ITBMBJA \$6100883	Greater wax moth	49.5-74.25 g/ Restricted use pesticide. 1,000 cu.ft Fumigation treatment. For use in (55% P/T) stored beehives, supers, and other beekeeping equipment. This usage intended for tableted form. Fumi- gation exposure periods are approx- imated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
8055.0005		
8055.0005	54.67 g/1,000 cu.ft (55% P/T)	Restricted use pesticide. Fumigation treatment. For use in stored beehives, supers, and other beekeeping equipment. This usage intended for pelleted form. Fumi- gation exposure periods are approx- imated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>

GRAIN, BULK COMMODITIES, PROCESSED FOODS, AND FOOD CONTAINERS(Stored Grain, Grain Storage and Handling Equipment)General Warnings and Limitations:Stored Commodity FumigationSilos and bins

Filling of silos and bins must be continuous. Determine addition sequence on a bags per minute basis to ensure even distribution throughout. Keep an accurate count of the number of bags used as the removal of bags from the grain is required once the grain is moved or transferred. Removal of bags is accomplished by transfer of the grain over a screen.

Grain elevator type bins and silos

Pour the required dosage of pellets into the dispenser reservoir. Add pellets uniformly and continuously to the commodity stream as bin is filled using an automatic dispenser. Start transfer of the commodity. Allow the bin to fill for about 1 minute, then activate the dispenser. Check the calibration to ensure that the proper addition rate has been achieved. After exposure time is completed, test working areas for phosphine gas. If gas is detected, workers should wear approved gas masks until all traces of gas have vanished. Open doors and windows or otherwise create a draft through tunnels and other enclosed spaces beneath bins. Unseal bin bottoms, activate conveyors, and begin the transfer. The natural draft through tunnels in combination with air movement caused by the operation of conveying equipment, elevator legs, or dust filters will quickly dilute any phosphine coming with the commodity from the bin.

Commodities stored in bulk or in bags, in warehouses and vaults

Tightly seal and lock all passageways to connecting buildings. Evacuate buildings during fumigation. Determine beforehand a distribution plan for placement of the bags. Floor area selected should be clean, dry, and unobstructed. Use as much of the floor space as possible to spread out the bags. Very large buildings may require several operators to complete the placement within the one-half hour period before phosphine gas is released. Operators should carry approved gas masks at all times. Open cans in the open air outside of the building. Place bags on the floor in a systematic manner, without overlapping or allowing them to touch. Do not toss bags in inaccessible areas. Vacate building and secure with a lock. For multiple story buildings, placement should begin with the uppermost floor and end with the ground floor. After required exposure time, open as many ground level doors as possible without entering the building. Working in pairs and wearing approved gas masks, enter the building after approximately 2 hours and open remaining doors and windows. Permit building to air out for several hours, then test for the presence of phosphine gas. When the building is free of gas, gather up all the spent bags and remove them from the building. Check bag count with the original placement count.

Flat storage

The facility must be one that can be properly sealed or otherwise pre-

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

(Stored Grain, Grain Storage and Handling Equipment) (continued)

General Warnings and Limitations (continued)

pared. Divide the square feet of grain surface area by 50 to yield the number of probes required. Divide the dosage by the number of probes required to determine the number of tablets required per probe. Insert probe to a depth of 12 feet. Release tablets every 12 inches as the probe is withdrawn. The number of tablets released at each foot is determined by dividing the number of tablets in each probe by 12. Tablets will begin to decompose in 3 hours. All work should be completed within 2 hours. Periodically test the working atmosphere above the commodity surface for the presence of phosphine gas. If concentrations develop in the working atmosphere before probing is complete, gas masks must be worn. Seal the flat storage unit to obtain an effective fumigation. If necessary, cover the commodity surface with plastic film or other gastight materials. For spot fumigation of flat storage, determine the volume of the infested area by probe sample, then double it. Determine the dosage on the basis of the highest dosage permitted. Using probes, insert the tablets uniformly throughout the spot to be treated. If the spot is close to the surface, place polyethylene film or other gastight materials over the area following insertion of the tablets. After exposure time is completed, working from outside, remove all seals and activate the head space ventilation fans if present. Ventilate any tunnels or enclosed spaces beneath buildings. Before workers are allowed to enter the building, test for presence of phosphine. If gas is present, continue aeration.

Transportation Vehicle TreatmentHopper cars with round hatch (static or rolling)

Close and secure all hatches except those being used for distribution of the gas. In every case, at least 2 hatches should be used at opposite ends of the car. All hatch covers must be soft and pliable. Thoroughly clean the flange lip on the hatches being used for application. Prepare cardboard discs by punching at least 12 holes at random in the discs. Open cans and remove bags. Divide the total dosage among the number of discs being used. Place the bags on the disc, spacing them at least 1 inch apart. Do not overlap the bags. Tape the disc in place with sanitary seal over them. Close and secure hatch covers.

Hopper cars with slotted hatch (static or rolling)

Using masking tape, make supports on 12 inch centers across the hatch opening. Use heavy cardboard, cut so it will rest on the hatch flanges, and tape into place. The rest of the procedure is the same as for cars with round hatch. When fumigating rail cars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

Boxcars (static or rolling) and static trailer vans

Use 2 pieces of heavy cardboard. Divide the total dosage, using one-half for each piece. Place the bags on the cardboard, spaced a minimum of 1 inch apart to avoid overlapping. Tape only bag ends to the cardboard. Take the prepared boards into the car and secure 1 in each end,

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

(Stored Grain, Grain Storage and Handling Equipment) (continued)General Warnings and Limitations (continued)

bag side up, to the load. If the load is covered with paper, secure cardboard to paper. If possible, drape remaining doorway with polyethylene film before door is closed. Secure edges to door jambs and floor. Close and secure door. If doorway is not draped, seal cracks, openings, and joints from the outside. When fumigating rail cars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

Bulk dry cargo vessels

Comply with the regulations found in U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. Seal all openings but the main hatch opening. Secure and lock all openings and passages normally used to enter the hold. Arrange for enough manpower to complete the preparations within 2 hours before phosphine gas begins to accumulate (refer to placement instructions under formulation subtopics). Regularly monitor all areas and spaces of the ship for the presence of phosphine until the ship leaves port. Check the tanks and holds for leaks and reseal if necessary. Upon arrival into the port of discharge, holds or tanks may be opened. Any phosphine in the free space above the commodity will dissipate to the atmosphere. There may be some gas remaining in the commodity itself, but it will disappear as discharge takes place. If it is necessary for workers to enter holds, the air space directly above the commodity mass should be tested for phosphine. If found in excess of allowed limits, extend aeration time.

Bagged form of aluminum phosphide: Open cans, remove bags, and insert into the pockets of bag blankets. Place the bag blankets fully extended onto the commodity surface. Space them several feet apart so they can not overlap. Close the hatch and cover immediately after blankets are in place.

Pelleted/tableted form of aluminum phosphide: Scatter pellets/tablets uniformly on commodity surface, insert with probe to any depth desired or add to commodity as storage area is filled.

Tankers

Comply with the regulations found in the U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. The overspace pressure relief system of each tank must be sealed by the closure of appropriate valves and covering the overspace opening with gastight materials. Close, secure, and seal the main hatch opening (big boy) and each auxiliary hatch opening (butterworth) immediately following the placement of the fumigating material (refer to placement instructions under formulation subtopics). Post danger signs. All areas of the ship should be monitored for presence of phosphine gas until the ship leaves port. Areas frequented by crew members should be monitored during the voyage. Reseal any leaks in tanks or holds. Tank holds may be opened upon arrival at discharge port. Any phosphine in the free air space above the commodity will rapidly dissipate. Gas remaining in the commodity mass

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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(Stored Grain, Grain Storage and Handling Equipment) (continued)

General Warnings and Limitations (continued)

will disperse as discharge takes place. If workers need to enter holds, test the air space directly above the commodity mass for phosphine. If gas is in excess of allowable limits, allow for additional aeration and/or ventilation. Bagged formulation of aluminum phosphide: A portion of the total number of bags designated for each tank must be allotted for placement in each auxiliary hatch opening and main hatch opening. Determine the length and number of bag blankets required for each tank and cut to length accordingly. Open cans and begin inserting the bags into the blankets. As each blanket is filled, position it fully extended on the commodity surface. When blankets are applied through the main hatch, workers will need to enter the tank. Secure each blanket with a stout cord. Tie the loose end to each auxiliary hatch opening plus the main hatch opening. Pelleted/tableted formulation of aluminum phosphide: Scatter pellets/tablets uniformly onto the commodity surface.

/2400100

Barley

0.1 ppm (as phosphine)
No preprocessing interval through
116.28 grams per 1,000 cubic feet or
193.4 grams per 1,000 bushels for
dust formulation, or 10.3 grams per
ton, 248 grams per 1,000 cubic feet,
or 307.8 grams per 1,000 bushels for
pelleted/tableted formulation.

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$2400121

D4601683

6057.0003

116.28-193.4
g/1,000 bu
(57% D)

Restricted use pesticide.
Stored commodity fumigation. For
use in silos and bins. This usage
intended for bagged form. The high-
er dosage rate should be used if the
rice weevil is present. Refer to
general warnings under (Stored
Grain, Grain Storage and Handling
Equipment) for specific information
on use in silos and bins. Fumiga-
tion exposure periods are approxi-
mated as follows: At 40 to 49 F
(4.4 to 9.4 C), 14 days; at 50 to

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

;		59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D4603383	58.14-116.28 g/1,000 cu.ft (57% D)	Restricted use pesticide. Stored commodity fumigation. For use with commodities stored in bags in warehouses and vaults. This use age intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use with commodities stored in bags in warehouses and vaults. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
6057.0003		
D4603383	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Stored commodity fumigation. For use with commodities stored in bulk in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on commodities stored in bulk in warehouses and vaults. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
6057.0003		

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

D4601683	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8055.0005		
D4601683	9.9 g/ton or 297 g/1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
8055.0005		
D4601683	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin.
8055.0005		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

;		Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4602383 &055.0005	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity treatment. For use with gastight tarpaulins. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten the package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4601683 &055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Place pellets in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4601683 &055.0005 ;	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

;		intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4602083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D4601083	5.1-10.3 g/ ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Exposure times may be approximated as follows: At 40 to 53 F (4.4 to
6057.0005		
;		

Use pattern continued on the next page.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

;		11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
D4601683 &060.0005	99 g/l,000 bu (60% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in upright concrete and steel storage bins. This usage intended for pelleted form. Pellets may be added to the grain stream by automatic dispenser as it is flowing into the bin in a manner so as to provide uniform spacing between individual pellets. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
\$2400137 D7001283 D7001883 &057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Barley (continued)

Stored product insects (continued)

D7001683	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in hopped bulk rail cars (static or rolling). This usage in- tended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>hopped bulk rail cars</u> (static or rolling). Fumigation ex- posure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7002083	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo</u> <u>vessels (bagged form of aluminum</u> <u>phosphide)</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsBarley (continued)

Stored product insects (continued)

D7002083	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage in- tended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in tankers (bagged form of aluminum phosphide). Fumigation ex- posure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
8057.0003		
D7002283	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the com- modity after loading is completed. Fumigation exposure periods are ap- proximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8055.0005		

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ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsBarley (continued)

Stored product insects (continued)

D7002283	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the com- modity after loading is completed. Fumigation exposure periods are ap- proximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
6055.0005		
D7001283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial sup- port. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7001683		
6055.0005		
D7002283		
D7002283	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in mois- ture permeable envelopes. Do not put more than 10 pellets per enve- lope. Envelopes must be fastened
6055.0005		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

Site and PestDosages and Formulation(s) Tolerance, Use, LimitationsBarley (continued)

Stored product insects (continued)

;		to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 8055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For grain not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes. Do not put more than 10 tablets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002083 8057.0005	2.7-3.4 g/ ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Barley (continued)</u>		
Stored product insects (continued)		
D7002083	2.7-3.4 g/ ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Barley (continued)</u>		
Stored product insects (continued)		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		
/2400200	<u>Corn</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2400221		Stored commodity fumigation.
S2400121		Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.
\$2400237		Transportation vehicle treatment.
S2400137		Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2400300 <u>Oats</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2400321		Stored commodity fumigation.
S2400121	Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$2400337		Transportation vehicle treatment.
S2400137	Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/2401200 <u>Proso Millet</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2401221		Stored commodity fumigation.
S2400121	Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Proso Millet (continued)

Stored product insects (continued)

\$2401237		Transportation vehicle treatment.
S2400137		Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.
/2400400	<u>Rice</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA		Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)
\$2400421		Stored commodity fumigation.
S2400121		Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.
\$2400437		Transportation vehicle treatment.
S2400137		Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2400500	<u>Rye</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2400521	Stored commodity fumigation.	
\$2400121	Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$2400537	Transportation vehicle treatment.	
\$2400137	Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/2400600	<u>Sorghum</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2400621	Stored commodity fumigation.	
\$2400121	Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sorghum (continued)</u>		
Stored product insects (continued)		
\$2400637		Transportation vehicle treatment.
S2400137		Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.
/2400700	<u>Wheat</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2400721		Stored commodity fumigation.
S2400121		Refer to Barley, Stored product insects, Stored commodity fumigation for use and limitation information.
\$2400737		Transportation vehicle treatment.
S2400137		Refer to Barley, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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(Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment)

General Warnings and Limitations:Stored Commodity FumigationSilos and bins

Filling of silos and bins must be continuous. Determine addition sequence on a bags per minute basis to ensure even distribution throughout. Keep an accurate count of the number of bags used as the removal of bags from the grain is required once the grain is moved or transferred. Removal of bags is accomplished by transfer of the grain over a screen.

Grain elevator type bins and silos

Pour the required dosage of pellets into the dispenser reservoir. Add pellets uniformly and continuously to the commodity stream as bin is filled using an automatic dispenser. Start transfer of the commodity. Allow the bin to fill for about 1 minute, then activate the dispenser. Check the calibration to ensure that the proper addition rate has been achieved. After exposure time is completed, test working areas for phosphine gas. If gas is detected, workers should wear approved gas masks until all traces of gas have vanished. Open doors and windows or otherwise create a draft through tunnels and other enclosed spaces beneath bins. Unseal bin bottoms, activate conveyors, and begin the transfer. The natural draft through tunnels in combination with air movement caused by the operation of conveying equipment, elevator legs, or dust filters will quickly dilute any phosphine coming with the commodity from the bin.

Commodities stored in bulk or in bags, in warehouses and vaults

Tightly seal and lock all passageways to connecting buildings. Evacuate buildings during fumigation. Determine beforehand a distribution plan for placement of the bags. Floor area selected should be clean, dry, and unobstructed. Use as much of the floor space as possible to spread out the bags. Very large buildings may require several operators to complete the placement within the one-half hour period before phosphine gas is released. Operators should carry approved gas masks at all times. Open cans in the open air outside of the building. Place bags on the floor in a systematic manner without overlapping or allowing them to touch. Do not toss bags in inaccessible areas. Vacate building and secure with a lock. For multiple story buildings, placement should begin with the uppermost floor and end with the ground floor. After required exposure time, open as many ground level doors as possible without entering the building. Working in pairs and wearing approved gas masks, enter the building after approximately 2 hours and open remaining doors and windows. Permit building to air out several hours, then test for the presence of phosphine gas. When the building is free of gas, gather up all the spent bags and remove them from the building. Check bag count with the original placement count.

Flat storage

The facility must be one that can be properly sealed or otherwise prepared. Divide the square feet of grain surface area by 50 to yield the

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ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)(Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) (continued)General Warnings and Limitations (continued)

number of probes required. Divide the dosage by the number of probes required to determine the number of tablets required per probe. Insert probe to a depth of 12 feet. Release tablets every 12 inches as the probe is withdrawn. The number of tablets released at each foot is determined by dividing the number of tablets in each probe by 12. Tablets will begin to decompose in 3 hours. All work should be completed within 2 hours. Periodically test the working atmosphere above the commodity surface for the presence of phosphine gas. If concentrations develop in the working atmosphere before probing is complete, gas masks must be worn. Seal the flat storage unit to obtain effective fumigation. If necessary, cover the commodity surface with plastic film or other gas-tight materials. For spot fumigation of flat storage, determine the volume of the infested area by probe sample, then double it. Determine the dosage on the basis of the highest dosage permitted. Using probes, insert the tablets uniformly throughout the spot to be treated. If the spot is close to the surface, place polyethylene film or other gastight materials over the area following insertion of the tablets. After exposure time is completed, working from outside, remove all seals and activate the head space ventilation fans if present. Ventilate any tunnels or enclosed spaces beneath buildings. Before workers are allowed to enter the building, test for presence of phosphine. If gas is present, continue aeration.

Transportation Vehicle TreatmentHopper cars with round hatch (static or rolling)

Close and secure all hatches except those being used for distribution of the gas. In every case, at least 2 hatches should be used at opposite ends of the car. All hatch covers must be soft and pliable. Thoroughly clean the flange lip on the hatches being used for application. Prepare cardboard discs by punching at least 12 holes at random in the discs. Open cans and remove bags. Divide the total dosage among the number of discs being used. Place the bags on the disc spacing them at least 1 inch apart. Do not overlap the bags. Tape the disc in place with sanitary seal over them. Close and secure hatch covers.

Hopper cars with slotted hatch (static or rolling)

Using masking tape, make supports on 12 inch centers across the hatch opening. Use heavy cardboard, cut so it will rest on the hatch flanges, and tape into place. The rest of the procedure is the same as for cars with round hatch. When fumigating rail cars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

Boxcars (static or rolling) and static trailer vans

Use 2 pieces of heavy cardboard. Divide the total dosage, using one-half for each piece. Place the bags on the cardboard, spaced a minimum of 1 inch apart to avoid overlapping. Tape only bag ends to the cardboard. Take the prepared boards into the car and secure 1 in each end, bag side up, to the load. If the load is covered with paper, secure

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ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)(Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) (continued)General Warnings and Limitations (continued)

cardboard to paper. If possible, drape remaining doorway with polyethylene film before door is closed. Secure edges to door jambs and floor. Close and secure door. If doorway is not draped, seal cracks, openings, and joints from the outside. When fumigating rail cars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

Bulk dry cargo vessels

Comply with the regulations found in U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. Seal all openings but the main hatch opening. Secure and lock all openings and passages normally used to enter the hold. Arrange for enough manpower to complete the preparations within 2 hours before phosphine gas begins to accumulate (refer to placement instructions under formulation subtopics). Regularly monitor all areas and spaces of the ship for the presence of phosphine until the ship leaves port. Check the tanks and holds for leaks and reseal if necessary. Upon arrival into the port of discharge, holds or tanks may be opened. Any phosphine in the free space above the commodity will dissipate to the atmosphere. There may be some gas remaining in the commodity itself, but it will disappear as discharge takes place. If it is necessary for workers to enter holds, the air space directly above the commodity mass should be tested for phosphine. If found in excess of allowed limits, extend aeration time.

Bagged form of aluminum phosphide: Open cans, remove bags, and insert into the pockets of bag blankets. Place the bag blankets fully extended onto the commodity surface. Space them several feet apart so they cannot overlap. Close the hatch and cover immediately after blankets are in place. Pelleted/tableted form of aluminum phosphide: Scatter pellets/tablets uniformly on commodity surface, insert with probe to any depth desired, or add to commodity as storage area is filled.

Tankers

Comply with the regulations found in the U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. The overspace pressure relief system of each tank must be sealed by the closure of appropriate valves and covering the overspace opening with gastight materials. Close, secure, and seal the main hatch opening (big boy) and each auxiliary hatch opening (butterworth) immediately following the placement of the fumigating material (refer to placement instructions under formulation subtopics). Post danger signs. All areas of the ship should be monitored for presence of phosphine gas until the ship leaves port. Areas frequented by crew members should be monitored during the voyage. Reseal any leaks in tanks or holds. Tank holds may be opened upon arrival at discharge port. Any phosphine in the free air space above the commodity will rapidly dissipate. Gas remaining in the commodity mass

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ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)(Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) (continued)General Warnings and Limitations (continued)

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will disperse as discharge takes place. If workers need to enter holds, test the air space directly above the commodity mass for phosphine. If gas is in excess of allowable limits, allow for additional aeration and/or ventilation. Bagged formulation of aluminum phosphide: A portion of the total number of bags designated for each tank must be allotted for placement in each auxiliary hatch opening and main hatch opening. Determine the length and number of bag blankets required for each tank and cut to length accordingly. Open cans and begin inserting the bags into the blankets. As each blanket is filled, position it fully extended on the commodity surface. When blankets are applied through the main hatch, workers will need to enter the tank. Secure each blanket with a stout cord. Tie the loose end to each auxiliary hatch opening plus the main hatch opening. Pelleted/tableted formulation of aluminum phosphide: Scatter pellets/tablets uniformly onto the commodity surface.

/0300100

Almond

0.1 ppm (as phosphine)

No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$0300121

58.14-116.28

Restricted use pesticide.

D4600283

g/1,000

Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Grain, Grain Storage and Handling Equipment) for specific information on use with commodities stored in bulk or in bags, in warehouses and vaults. Fumigation exposure periods

cu.ft

6057.0003

(57% D)

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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Almond (continued)

Stored product insects (continued)

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are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

D4600283

33-66 g/1,000
cu.ft

6055.0005

(55% P/T)

Restricted use pesticide. Stored commodity fumigation. For use with bags and boxes in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Place pellets in moisture permeable envelopes at the rate of 2 per envelope and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

D4600283

49.5 g/1,000
cu.ft

6055.0005

(55% P/T)

Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

D4600283

74.25-99 g/
1,000 cu.ft
(55% P/T)

6055.0005

Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The

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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Almond (continued)

Stored product insects (continued)

		higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D4601083	5.1-10.3 g/ ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Exposure times may be approximated as follows: At
6057.0005		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Almond (continued)</u>		
Stored product insects (continued)		
		40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
\$0300137 D7001283 D7001883 6057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7002283 6055.0005	33-66 g/l,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with bags and boxes in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. The pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Almond (continued)</u>		
Stored product insects (continued)		
D7002283	49.5 g/1,000 cu.ft	Restricted use pesticide. Transportation vehicle treatment.
8055.0005	(55% P/T)	For use in unmanned barges. This usage intended for tableted form. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002283	74.25-99 g/1,000 cu.ft	Restricted use pesticide. Transportation vehicle treatment.
8055.0005	(55% P/T)	For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Almond (continued)

Stored product insects (continued)

D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>pelleted/tableted form</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days, at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Almond (continued)

Stored product insects (continued)

D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage in- tended for tableted form. The high- er dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodi- ties, Storage and Handling Equip- ment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days, at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is pre- sent. Refer to general warnings un- der (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific in- formation on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are ap- proximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/0300200	<u>Brazil Nut</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)		
\$0300221			Stored commodity fumigation.
S0300121		Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$0300237			Transportation vehicle treatment.
S0300137		Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/0300300	<u>Cashew</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)		
\$0300321			Stored commodity fumigation.
S0300121		Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cashew (continued)</u>		
Stored product insects (continued)		
\$0300337		Transportation vehicle treatment.
S0300137		Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.
/0700100	<u>Cocoa, Beverage Crop</u>	0.1 ppm (as phosphine) (cocoa beans) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$0700121	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with commodities stored in bulk or in bags, in warehouses and vaults. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
\$057.0003	(57% D)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cocoa, Beverage Crop (continued)

Stored product insects (continued)

D4600283 6055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283 6055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cocoa, Beverage Crop (continued)

Stored product insects (continued)

;		than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 8055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283 8057.0005	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cocoa, Beverage Crop (continued)

Stored product insects (continued)

D4601083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Exposure times may be approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
8057.0005		
\$0700137	58.14-116.28	Restricted use pesticide.
D7001283	g/1,000	Transportation vehicle treatment.
D7001883	cu.ft	For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
8057.0003	(57% D)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cocoa, Beverage Crop (continued)</u>		
Stored product insects (continued)		
D7002283 6055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002283 6055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. The pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per

Use pattern continued on the next page.

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Site and PestDosages and Formulation(s)Tolerance, Use, LimitationsCocoa, Beverage Crop (continued)

Stored product insects (continued)

		envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
6055.0005		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cocoa, Beverage Crop (continued)</u>		
Stored product insects (continued)		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days, at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cocoa, Beverage Crop (continued)</u>		
Stored product insects (continued)		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
&057.0005		
/0700200	<u>Coffee, Beverage Crop</u>	0.1 ppm (as phosphine) (coffee beans) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$0700221		Stored commodity fumigation.
S0700121	Refer to Cocoa, Beverage Crop, Stored product insects, Stored commodity fumigation for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Coffee, Beverage Crop (continued)</u>		
Stored product insects (continued)		
\$0700237		Transportation vehicle treatment.
S0700137		Refer to Cocoa, Beverage Crop, Stored product insects, Transportation vehicle treatment for use and limitation information.
/1500400	<u>Corn, Pop</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$1500421	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use with commodities stored in bags in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with <u>commodities stored in bulk or in bags, in warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
6057.0003	(57% D)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D4600283 6057.0003	116.28-193.4 g/l,000 bu (57% D)	Restricted use pesticide. Stored commodity fumigation. For use in silos and bins. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>silos and bins</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D4600283 6057.0003	116.28-193.4 g/l,000 bu (57% D)	Restricted use pesticide. Stored commodity fumigation. For use with commodities stored in bulk in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with <u>commodities stored in bulk or in bags, in warehouses and vaults</u>). Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D4600283 6055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283 6055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Corn, Pop (continued)

Stored product insects (continued)

;		than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 8055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283 8057.0005	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D4601083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
8057.0005		
\$1500437	58.14-116.28	Restricted use pesticide.
D7001283	g/1,000	Transportation vehicle treatment.
D7001883	cu.ft	For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
8057.0003	(57% D)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D7002083 6057.0003	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (bagged form of aluminum phosphide)</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7002083 6057.0003	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tankers (bagged form of aluminum phosphide)</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D7001683	116.28-193.4 g/1,000 bu	Restricted use pesticide. Transportation vehicle treatment. For use in hopped bulk rail cars (static or rolling). This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>hopped bulk rail cars (static or rolling)</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
6057.0003	(57% D)	
D7002283	3.3 g/ton or 39.6-99 g/1,000 bu	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D7002283	9.9 g/ton or	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form.
6055.0005	99-297 g/ 1,000 bu (55% P/T)	
		The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002283	54.45-66 g/ 1,000 cu.ft	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form.
6055.0005	(55% P/T)	
		The higher dosage rate should be used if the rice weevil is present. The pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D7002283	74.25-99 g/ 1,000 cu.ft	Restricted use pesticide. Transportation vehicle treatment.
6055.0005	(55% P/T)	For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005	(57% P/T)	

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ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsCorn, Pop (continued)

Stored product insects (continued)

D7002083

2.7-3.4 g/ton Restricted use pesticide.
 or Transportation vehicle treatment.
 56.4-82.1 g/ For use in bulk dry cargo vessels.
 1,000 cu.ft This usage intended for pelleted
 or form. The higher dosage rate should
 71.8-102.6 g/ be used if the rice weevil is pre-
 1,000 bu sent. Refer to general warnings
 (57% P/T) under (Stored Raw Agricultural Food
 and Feed Commodities, Storage and
 Handling Equipment) for specific in-
 formation on use in bulk dry cargo
 vessels (pelleted/tableted form).
 Fumigation exposure periods are ap-
 proximated as follows: At 40 to
 53 F (4.4 to 11.7 C), 8 days; at 54
 to 59 F (12.2 to 15.0 C), 4 days;
 at 60 to 68 F (15.6 to 20.0 C), 3
 days; and above 68 F (20.0 C), 2
 days.

D7002083

5.1-10.3 g/
 ton Restricted use pesticide.
 or Transportation vehicle treatment.
 128.25-248 g/ For use in tankers. This usage in-
 1,000 cu.ft tended for tableted form. The high-
 or er dosage rate should be used if the
 153.9-307.8 rice weevil is present. Refer to
 g/1,000 bu general warnings under (Stored Raw
 (57% P/T) Agricultural Food and Feed Commodi-
 ties, Storage and Handling Equip-
 ment) for specific information on
 use in tankers (pelleted/tableted
 form). Fumigation exposure periods
 are approximated as follows: At 40
 to 53 F (4.4 to 11.7 C), 10 days;
 at 54 to 59 F (12.2 to 15.0 C), 5
 days; at 60 to 68 F (15.6 to
 20.0 C), 4 days; and above 68 F
 (20.0 C), 3 days.

6057.0005

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Pop (continued)</u>		
Stored product insects (continued)		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
8057.0005		
/2700300	<u>Cotton, Oil Crop</u>	0.1 ppm (as phosphine) (cottonseed) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2700321		Stored commodity fumigation.
S0700121		Refer to Cocoa, Beverage Crop, Stored product insects, Stored commodity fumigation for use and limitation information.
\$2700337		Transportation vehicle treatment.
S0700137		Refer to Cocoa, Beverage Crop, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/0600400	<u>Date</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)		
\$0600421			Stored commodity fumigation.
S0300121		Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$0600437			Transportation vehicle treatment.
S0300137		Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/0300500	<u>Filbert</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)		
\$0300521			Stored commodity fumigation.
S0300121		Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Filbert (continued)</u>		
Stored product insects (continued)		
\$0300537		Transportation vehicle treatment.
S0300137		Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.
/2801500	<u>Peanuts</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2801521	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This
&057.0003	(57% D)	usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with <u>commodities stored in bulk or in bags, in warehouses or vaults.</u> Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Peanuts (continued)

Stored product insects (continued)

D4600283 &055.0005	33-66 g/l,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with bags and boxes in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Place pellets in moisture permeable envelopes at the rate of 10 per envelope and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4602483 &055.0005	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity treatment. For use with gastight tarpaulins. This usage intended for prepackaged form. The higher dosage rate should be used if the rice weevil is present. Fasten the package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 &055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Peanuts (continued)</u>		
Stored product insects (continued)		
D4600283 &055.0005	99-206.25 g/ 1,000 cu.ft (55% P/T)	(15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
		Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283 &057.0005	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Peanuts (continued)

Stored product insects (continued)

D4601083	5.1-10.3 g/ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
\$2801537 D7001283 D7001883 8057.0003	58.14-116.28 g/1,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Peanuts (continued)</u>		
Stored product insects (continued)		
D7001283 D7001683 &055.0005 D7002283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 &055.0005	54.5-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with bags and boxes in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 &055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fas-

Use pattern continued on the next page.

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Site and Pest

Dosages and
Formulation(s)

Tolerance, Use, Limitations

Peanuts (continued)

Stored product insects (continued)

;	tened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.	
D7002283	99-206.25 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
8055.0005		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in tankers (pelleted/tableted form). Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8057.0005		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Peanuts (continued)</u>		
Stored product insects (continued)		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
&057.0005	(57% P/T)	
D7002083	5.1-10.3 g/ ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tankers (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
&057.0005	(57% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Peanuts (continued)</u>		
Stored product insects (continued)		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in bulk dry cargo vessels (pelleted/tableted form). Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
/0300800	<u>Pecan</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$0300821		Stored commodity fumigation.
S0300121	Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$0300837		Transportation vehicle treatment.
S0300137	Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/0301100	<u>Pistachio Nut</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$0301121		Stored commodity fumigation.
S0300121	Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$0301137		Transportation vehicle treatment.
S0300137	Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2700800 <u>Safflower, Oil Crop</u>		0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 9.9 grams per ton, 99 grams per 1,000 cubic feet, or 297 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA		Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)
\$2700821	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with <u>commodities stored in bulk or in bags, in warehouses and vaults.</u> Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
&057.0003	(57% D)	
D4600283	3.3 g/ton or 39.6-99 g/ 1,000 bu	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to
&055.0005	(55% P/T)	
;		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Safflower, Oil Crop (continued)</u>		
Stored product insects (continued)		
;		59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283	9.9 g/ton	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
	or	
	99-297 g/1,000 bu	
&055.0005	(55% P/T)	
D4602483	34.1-54.5 g/1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged form. The higher dosage rate should be used if the rice weevil is present. Fasten the package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
&055.0005	(55% P/T)	
D4600283	54.5-66 g/1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture perme-
&055.0005	(55% P/T)	
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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Safflower, Oil Crop (continued)

Stored product insects (continued)

;		able envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 6055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
\$2700837 D7001283 D7001883 6057.0003	58.14-116.28 g/1,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in boxcars (static or rolling) and static trailer vans. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50
;		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

Site and Pest

Dosages and
Formulation(s)

Tolerance, Use, Limitations

Safflower, Oil Crop (continued)

Stored product insects (continued)

;		to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7002283	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6055.0005		
D7002283	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
6055.0005		
D7001283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The
D7001683		
6055.0005		
D7002283		
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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Safflower, Oil Crop (continued)

Stored product insects (continued)

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higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

D7002283
6055.0005

54.45-66 g/
1,000 cu.ft
(55% P/T)

Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. The pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

D7002283
6055.0005

74.25-99 g/
1,000 cu.ft
(55% P/T)

Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/1500000	<u>Seed and Pod Vegetables (including adzuki red beans, blackeyed peas, garbanzo beans, great northern beans, green split peas, lentil peas, lima beans, michigan navy beans, moth beans, mung beans, pinto beans, and split urds)</u>	0.01 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 9.9 grams per ton, 99 grams per 1,000 cubic feet, or 297 grams per 1,000 bushels for pelleted/tableted formulation. These usages not intended for soybeans.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, driedfruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, sawtoothed grain beetle, spider beetles, and yellow mealworm)	
\$1500021		Stored commodity fumigation.
S2700821	Refer to Safflower, Oil Crop, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$1500037		Transportation vehicle treatment.
S2700837	Refer to Safflower, Oil Crop, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2801800	<u>Sesame Seed</u>		0.1 ppm (as phosphine) No preprocessing interval through 3.3 grams per ton, 66 grams per 1,000 cubic feet, or 99 grams per 1,000 bushels for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)		
\$2801821		3.3 g/ton	Restricted use pesticide.
D4600283		or	Stored commodity fumigation. For
		39.6-99 g/	use in storage bins. This usage in-
		1,000 bu	tended for pelleted form. The high-
6055.0005		(55% P/T)	er dosage rate should be used if the rice weevil is present. May be in-
			jected into the commodity with a
			probe or may be fed into the commod-
			ity stream at uniform spacing as it
			is flowing into the storage bin.
			Fumigation exposure periods are ap-
			proximated as follows: At 54 to
			59 F (12.2 to 15.0 C), 4 days; at
			60 to 68 F (15.6 to 20.0 C), 3 days;
			and above 68 F (20.0 C), 2 days.
D4602483		34.1-54.5 g/	Restricted use pesticide.
		1,000 cu.ft	Stored commodity fumigation. For
6055.0005		(55% P/T)	use with gastight tarpaulins. This
			usage intended for prepackaged form.
			The higher dosage rate should be
			used if the rice weevil is present.
			Fasten the package to a substantial
			support. Fumigation exposure per-
			iods are approximated as follows:
			At 54 to 59 F (12.2 to 15.0 C), 4
			days; at 60 to 68 F (15.6 to
			20.0 C), 3 days; and above 68 F
			(20.0 C), 2 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sesame Seeds (continued)</u>		
Stored product insects (continued)		
D4600283 4055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
82801837 07002283 4055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
07001283 07001683 4055.0005 07002283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sesame Seeds (continued)</u>		
Stored product insects (continued)		
;		are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
/2701000	<u>Soybeans, Oil Crop</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet or 193.4 grams per 1,000 bushels for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels of pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2701021	116.28-193.4	Restricted use pesticide.
D4600283	g/1,000 bu	Stored commodity fumigation. For
6057.0003	(57% D)	use in silos and bins. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in silos and bins. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D4600283 4057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Stored commodity fumigation. For use with commodities stored in bags in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with commodities stored in bulk and in bags, in warehouses and vaults. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D4600283 4057.0003	116.28-193.4 g/l,000 bu (57% D)	Restricted use pesticide. Stored commodity fumigation. For use with commodities stored in bulk in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with commodities stored in bulk or in bags, in warehouses and vaults. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D4600283 6055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283 6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 3 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 1 day.
D4600283 6055.0005	34.45-86 g/ 1,000 cu. ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Over

Use pellets contained on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Soybeans, Oil Crop (continued)

Stored product insects (continued)

;		lopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 3 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
6055.0005		
D4600283	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D4601083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		
\$2701037 D7002083 6057.0003	116.28-193.4 g/1,000 bu (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (bagged form of aluminum phosphide)</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7002083	116.28-193.4	Restricted use pesticide.
6057.0003	g/1,000 bu (57% D)	Transportation vehicle treatment. For use in tankers. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in tankers (bagged form of aluminum phosphide). Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7001683	116.28-193.4	Restricted use pesticide.
6057.0003	g/1,000 bu (57% D)	Transportation vehicle treatment. For use in hopped bulk rail cars (static or rolling). This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in hopped bulk rail cars (static or rolling). Fumigation exposure periods are approximated as follow: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7001283 D7001883 4057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7002283 4055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7002283	9.9 g/ton	Restricted use pesticide.
	or	Transportation vehicle treatment.
	99-297 g/	For use in unmanned barges. This
	1,000 bu	usage intended for tableted form.
6055.0005	(55% P/T)	The higher dosage rate should be
		used if the rice weevil is present.
		Feed tablets into the commodity as
		the barge is being loaded or insert
		them below the surface of the com-
		modity after loading is completed.
		Fumigation exposure periods are ap-
		proximated as follows: At 54 to
		59 F (12.2 to 15.0 C), a minimum of
		3 days; at 60 to 68 F (15.6 to
		20.0 C), a minimum of 4 days; and
		above 68 F (20.0 C), a minimum of 3
		days.
D7002283	54.45-66 g/	Restricted use pesticide.
	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use with commodities not stored
		in bulk in unmanned barges. This
		usage intended for pelleted form.
		The higher dosage rate should be
		used if the rice weevil is present.
		The pellets must be contained in
		moisture permeable envelopes. Do
		not put more than 10 pellets per
		envelope. Envelopes must be fas-
		tened to a substantial support.
		Fumigation exposure periods are ap-
		proximated as follows: At 54 to
		59 F (12.2 to 15.0 C), 4 days; at
		60 to 68 F (15.6 to 20.0 C), 3 days;
		and above 68 F (20.0 C), 2 days.
D7002283	74.25-99 g/	Restricted use pesticide.
	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use with commodities not stored
		in bulk in unmanned barges. This
		usage intended for tableted form.
		The higher dosage rate should be
		used if the rice weevil is present.
		The tablets must be contained in

See pellets contained on the back page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Soybeans, Oil Crop (continued)

Stored product insects (continued)

;		moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.6-102.6 g/1,000 bu (372 P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.6-102.6 g/1,000 bu (372 P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tanks. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>tanks (pelleted/tableted form)</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6057.0005		

See page continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Soybeans, Oil Crop (continued)

Stored product insects (continued)

		to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002083	3.1-10.3 g/ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in tankers (pelleted/tableted form). Fumigation exposure periods are approximated as follows: At 60 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
4057.0005		
D7002083	3.1-10.3 g/ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in bulk dry cargo vessels (pelleted/tableted form). Fumigation exposure periods are approximated as follows: At 60 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
4057.0005		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2701100	<u>Sunflower, Oil Crop</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels of pelleted/tableted formulation.
IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2701121 D4600283 4057.0003	58.14-116.28 g/1,000 cu.ft (57% D)	Restricted use pesticide. Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use with commodities stored in bulk or in bags, in warehouses and vaults. Fumigation exposure periods are approximated as follows: 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D4600283 4057.0003	2.2 g/ton or 20.0-25 g/ 1,000 bu (55% F/S)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity through an uniform opening or it is flowing into the storage bin. Fumigation exposure periods are ap-

For general information on the above agents.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Sunflower, Oil Crop (continued)

Stored product insects (continued)

;		proximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4600283	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
4055.0005		
D4600483	56.3-56.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged form. The higher dosage rate should be used if the rice weevil is present. Factor the package for a substantial support. Fumigation exposure periods are approximated as follows: at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
4055.0005		
D4600083	56.3-56.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for prepackaged form. The higher dosage rate should be used if the rice weevil is present. Factor the
4055.0005		

See package directions on the next page.

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ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsSunflower, Oil Crop (continued)

Stored product insects (continued)

must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 34 to 39 F (12.2 to 15.0 C), 4 days; at 40 to 48 F (15.6 to 20.0 C), 3 days; and above 48 F (20.0 C), 2 days.

04600263

74.25-99 g/
1,000 cu.ft
(331 g/l)

Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: at 34 to 39 F (12.2 to 15.0 C), a minimum of 3 days; at 40 to 48 F (15.6 to 20.0 C), a minimum of 3 days; and above 48 F (20.0 C), a minimum of 3 days.

6055-0005

04600263

2-7-3.6 g/lbin
or
74.25-99 g/
1,000 cu.ft
or
74.25-99 g/
1,000 cu
(331 g/l)

Restricted use pesticide. Stored commodity fumigation. For use in grain storage bins and silos. This usage intended for granular form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Storage and Handling) for specific instructions on use in grain storage bins and silos. Fumigation exposure periods are approximated as follows: at 34 to 39 F (12.2 to 15.0 C), 4 days; at 40 to 48 F (15.6 to 20.0 C), 3 days; and above 48 F (20.0 C), 2 days.

6055-0005

This pesticide is listed on the label page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sunflower, Oil Crop (continued)</u>		
Stored product insects (continued)		
D4601083	5.1-10.3 g/ton	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>flat storage</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
	or 128.25-248 g/1,000 cu.ft	
8057.0005	or 153.9-307.8 g/1,000 bu	
	(57% P/T)	
\$2701137 D7001283 D7001883 8057.0003	58.14-116.28 g/1,000 cu.ft	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) and static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) or static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
	(57% D)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sunflower, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7002283 6055.0005	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Feed pellets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Feed tablets into the commodity as the barge is being loaded or insert them below the surface of the commodity after loading is completed. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7001283 D7001683 6055.0005 D7002283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sunflower, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7002283 &055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
		Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. The pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 &055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sunflower, Oil Crop (continued)</u>		
Stored product insects (continued)		
D7002083	2.7-3.4 g/ton	Restricted use pesticide.
	or	Transportation vehicle treatment.
	56.4-82.1 g/	For use in tankers. This usage in-
	1,000 cu.ft	tended for pelleted form. The high-
	or	er dosage rate should be used if the
	71.8-102.6 g/	rice weevil is present. Refer to
	1,000 bu	general warnings under (Stored Raw
6057.0005	(57% P/T)	Agricultural Food and Feed Commod-
		ities, Storage and Handling Equip-
		ment) for specific information on
		use in <u>tankers</u> . Fumigation exposure
		periods are approximated as follows:
		At 40 to 53 F (4.4 to 11.7 C), 8
		days; at 54 to 59 F (12.2 to
		15.0 C), 4 days; at 60 to 68 F
		(15.6 to 20.0 C), 3 days; and above
		68 F (20.0 C), 2 days.
D7002083	2.7-3.4 g/ton	Restricted use pesticide.
	or	Transportation vehicle treatment.
	56.4-82.1 g/	For use in bulk dry cargo vessels.
	1,000 cu.ft	This usage intended for pelleted
	or	form. The higher dosage rate should
	71.8-102.6 g/	be used if the rice weevil is pre-
	1,000 bu	sent. Refer to general warnings un-
6057.0005	(57% P/T)	der (Stored Raw Agricultural Food
		and Feed Commodities, Storage and
		Handling Equipment) for specific in-
		formation on use in <u>bulk dry cargo</u>
		<u>vessels</u> . Fumigation exposure per-
		iods are approximated as follows:
		At 40 to 53 F (4.4 to 11.7 C), 8
		days; at 54 to 59 F (12.2 to
		15.0 C), 4 days; at 60 to 68 F
		(15.6 to 20.0 C), 3 days; and above
		68 F (20.0 C), 2 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Sunflower, Oil Crop (continued)

Stored product insects (continued)

D7002083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage in- tended for tableted form. The high- er dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Raw Agricultural Food and Feed Commodi- ties, Storage and Handling Equip- ment) for specific information on use in <u>tankers</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
8057.0005		
D7002083	5.1-10.3 g/ ton or 128.25-248 g/1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is pre- sent. Refer to general warnings un- der (Stored Raw Agricultural Food and Feed Commodities, Storage and Handling Equipment) for specific in- formation on use in <u>bulk dry cargo vessels (pelleted/tableted form)</u> . Fumigation exposure periods are ap- proximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
8057.0005		

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/0300900	<u>Walnut</u>	0.1 ppm (as phosphine) No preprocessing interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 10.3 grams per ton, 248 grams per 1,000 cubic feet, or 307.8 grams per 1,000 bushels of pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$0300921	Stored commodity fumigation.	
S0300121	Refer to Almond, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$0300937	Transportation vehicle treatment.	
S0300137	Refer to Almond, Stored product insects, Transportation vehicle treatment for use and limitation information.	

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)(Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment)

General Warnings and Limitations: Under no condition shall any processed food come in contact with aluminum phosphide or aluminum phosphide residue except as follows: Aluminum phosphide may be added directly to processed brewer's rice, malt, or corn grits stored by brewers for the use in the manufacture of beer.

Stored Commodity FumigationGrain elevator type bins and silos

Pour the required dosage of pellets into the dispenser reservoir. Add pellets uniformly and continuously to the commodity stream as bin is filled using an automatic dispenser. Start transfer of the commodity. Allow the bin to fill for about 1 minute, then activate the dispenser. Check the calibration to ensure that the proper addition rate has been achieved. After exposure time is completed, test working areas for phosphine gas. If gas is detected, workers should wear approved gas masks until all traces of gas have vanished. Open doors and windows or otherwise create a draft through tunnels and other enclosed spaces beneath bins. Unseal bin bottoms, activate conveyors, and begin the transfer. The natural draft through tunnels in combination with air movement caused by the operation of conveying equipment, elevator legs, or dust filters will quickly dilute any phosphine coming with the commodity from the bin.

Warehouses and vaults

Tightly seal and lock all passageways to connecting buildings. Evacuate buildings during fumigation. Determine beforehand a distribution plan for placement of the bags. Floor area selected should be clean, dry, and unobstructed. Use as much of the floor space as possible to spread out the bags. Very large buildings may require several operators to complete the placement within the one-half hour period before phosphine gas is released. Operators should carry approved gas masks at all times. Open cans in the open air outside of the building. Place bags onto the floor in a systematic manner without overlapping or allowing them to touch. Do not toss bags in inaccessible areas. Vacate buildings and secure with a lock. For multiple story buildings, placement should begin with the uppermost floor and end with the ground floor. After required exposure time, open as many ground level doors as possible without entering the building. Working in pairs and wearing approved gas masks, enter the building after approximately 2 hours and open remaining doors and windows. Permit building to air out for several hours, then test for the presence of phosphine gas. When the building is free of gas, gather up all the spent bags and remove them from the building. Check bag count with the original placement count.

Flat storage

The facility must be one that can be properly sealed or otherwise prepared. Divide the square feet of grain surface area by 50 to yield the number of probes required. Divide the dosage by the number of probes required to determine the number of tablets required per probe. Insert probe to a depth of 12 feet. Release tablets every 12 inches as the

ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)

(Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) (continued)

General Warnings and Limitations (continued)

probe is withdrawn. The number of tablets released at each foot is determined by dividing the number of tablets in each probe by 12. Tablets will begin to decompose in 3 hours. All work should be completed within 2 hours. Periodically test the working atmosphere above the commodity surface for the presence of phosphine gas. If concentrations develop in the working atmosphere before probing is complete, gas masks must be worn. Seal the flat storage unit to obtain an effective fumigation. If necessary, cover the commodity surface with plastic film or other gas-tight materials. For spot fumigation of flat storage, determine the volume of the infested area by probe sample, then double it. Determine the dosage on the basis of the highest dosage permitted. Using probes, insert the tablets uniformly throughout the spot to be treated. If the spot is close to the surface, place polyethylene film or other gastight materials over the area following insertion of the tablets. After exposure time is completed, working from outside, remove all seals and activate the head space ventilation fans if present. Ventilate any tunnels or enclosed spaces beneath buildings. Before workers are allowed to enter the building, test for presence of phosphine. If gas is present, continue aeration.

Containers

Pour pellets/tablets in a single layer on trays or similar devices and place inside container. If floor space is limited, it may be necessary to place the trays on top of the load. In warm weather placement should be completed within one-half hour after the flasks are opened. Vacate container and seal and lock doors. When exposure is complete, open container doors. After 1 hour test for the presence of phosphine gas. Operators should wear approved gas masks.

Tobacco warehouses

All passageways to connecting buildings and all entrances should be locked and sealed. Establish a plan for distribution of the pellets/tablets. The floor where pellets/tablets are to be placed must be clean, dry, and unobstructed. Place paper sheets according to the distribution plan. Pour pellets/tablets onto the paper. In warm weather placement should be completed within one-half hour after the flasks are opened. Large buildings may require several operators to achieve placement of pellets/tablets within allotted time. When exposure is complete, open as many doors and vents as possible without entering the warehouse. Enter after approximately 2 hours and open any additional doors, louvers, or vents to aid ventilation. Operators should work in pairs and wear approved gas masks. Activate any power ventilation systems and allow the building to air out for several hours. Test for presence of phosphine gas.

Transportation vehicle treatmentBoxcars (static or rolling) and static trailer vans

Use 2 pieces of heavy cardboard. Divide the total dosage, using one-

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

(Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) (continued)

General Warnings and Limitations (continued)

half for each piece. Place the bags on the cardboard spaced a minimum of 1 inch apart to avoid overlapping. Tape only bag ends to the cardboard. Take the prepared boards into the car and secure 1 in each end, bag side up, to the load. If the load is covered with paper, secure cardboard to paper. If possible, drape remaining doorway with polyethylene film before door is closed. Secure edges to door jams and floor. Close and secure door. If doorway is not draped, seal cracks, openings, and joints from the outside. When fumigating rail cars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

Bulk dry cargo vessels

Comply with the regulations found in U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. Seal all openings but the main hatch opening. Secure and lock all openings and passages normally used to enter the hold. Arrange for enough manpower to complete the preparations within 2 hours before phosphine gas begins to accumulate (refer to placement instructions under formulation subtopics). Regularly monitor all areas and spaces of the ship for the presence of phosphine until the ship leaves port. Check the tanks and holds for leaks and reseal if necessary. Upon arrival into the port of discharge, holds or tanks may be opened. Any phosphine in the free space above the commodity will dissipate to the atmosphere. There may be some gas remaining in the commodity itself, but it will disappear as discharge takes place. If it is necessary for workers to enter holds, the air space directly above the commodity mass should be tested for phosphine. If found in excess of allowed limits, extend aeration time.

Bagged form of aluminum phosphide: Open cans, remove bags, and insert into the pockets of bag blankets. Place the bag blankets fully extended onto the commodity surface. Space them several feet apart so they cannot overlap. Close the hatch and cover immediately after blankets are in place. Pelleted/tableted form of aluminum phosphide: Scatter pellets/tablets uniformly on commodity surface, insert with probe to any depth desired, or add to commodity as storage area is filled.

Tankers

Comply with the regulations found in the U.S. Coast Guard Regulations, 46 CFR 147A. Determine if ship holds are constructed to permit an in-transit fumigation without danger to the crew. The overspace pressure relief system of each tank must be sealed by the closure of appropriate valves and covering the overspace opening with gastight materials. Close, secure, and seal the main hatch opening (big boy) and each auxiliary hatch opening (butterworth) immediately following the placement of the fumigating material (refer to placement instructions under formulation subtopics). Post danger signs. All areas of the ship should be monitored for presence of phosphine gas until the ship leaves port.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

(Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) (continued)

General Warnings and Limitations (continued)

Areas frequented by crew members should be monitored during the voyage. Reseal any leaks in tanks or holds. Tank holds may be opened upon arrival at discharge port. Any phosphine in the free air space above the commodity will rapidly dissipate. Gas remaining in the commodity mass will disperse as discharge takes place. If workers need to enter holds, test the air space directly above the commodity mass for phosphine. If gas is in excess of allowable limits, allow for additional aeration and/or ventilation. Bagged formulation of aluminum phosphide: A portion of the total number of bags designated for each tank must be allotted for placement in each auxiliary hatch opening and main hatch opening. Determine the length and number of bag blankets required for each tank and cut to length accordingly. Open cans and begin inserting the bags into the blankets. As each blanket is filled, position it fully extended on the commodity surface. When blankets are applied through the main hatch, workers will need to enter the tank. Secure each blanket with a stout cord. Tie the loose end to each auxiliary hatch opening plus the main hatch opening. Pelleted/tableted formulation of aluminum phosphide: Scatter pellets/tablets uniformly onto the commodity surface.

/4304400

Animal Feed

0.1 ppm (as phosphine)
Minimum of 2 day aeration interval
through 116.28 grams per 1,000 cubic
feet for dust formulation, or 10.3
grams per ton, 248 grams per 1,000
cubic feet, or 307.8 grams per 1,000
bushels for pelleted/tableted formu-
lation.

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$4304421

58.14-116.28

Restricted use pesticide.

D4600283

g/1,000

Stored commodity fumigation. For use in warehouses and vaults. This

cu.ft

usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products

6057.0003

(57% D)

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Animal Feed (continued)

Stored product insects (continued)

;		(Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>warehouses or vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D4600283	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8055.0005		
D4600283	9.9 g/ton or 297 g/1,000 bu (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in storage bins. This usage intended for tableted form. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage bin. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
8055.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Animal Feed (continued)</u>		
Stored product insects (continued)		
D4602483 6055.0005	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4602483 6055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4602483 6055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 tablets per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Animal Feed (continued)

Stored product insects (continued)

;		to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4600283	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with commodities not stored in bulk in storage bins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8055.0005		
D4600283	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in grain elevator type bins and silos. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>grain elevator type bins and silos</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8057.0005		

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Animal Feed (continued)

Stored product insects (continued)

D4601083	5.1-10.3 g/ ton or 128.25-248 g/ 1,000 cu.ft or 153.9-307.8 g/1,000 bu (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in flat storage. This usage in- tended for tableted form. The high- er dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Pro- cessed Food and Feed Products (In- cluding Tobacco), Storage and Han- dling Equipment) for specific infor- mation on use in <u>flat storage</u> . Fu- migation exposure periods are ap- proximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
6057.0005		
\$4304437 D7001283 D7001883 6057.0003	58.14-116.28 g/1,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or roll- ing) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific in- formation on use in <u>boxcars (static or rolling) or static trailer vans</u> . Fumigation exposure periods are ap- proximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Animal Feed (continued)

Stored product insects (continued)

D7002283	3.3 g/ton or 39.6-99 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets may be fed into the commod- ity as the barge is being loaded or may be inserted below the surface of the commodity after loading is com- plete. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
&055.0005		
D7002283	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per enve- lope, and fasten to a substantial support. Fumigation exposure per- iods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
&055.0005		
D7002283	9.9 g/ton or 297 g/1,000 bu (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in unmanned barges. This usage intended for tableted form. Tablets may be fed into the commod- ity as the barge is being loaded or may be inserted below the surface of the commodity after loading is com- pleted. Fumigation exposure periods are approximated as follows: At 54
&055.0005		

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Animal Feed (continued)

Stored product insects (continued)

;		to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7001283 D7001683 6055.0005 D7002283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7002283 6055.0005	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use with commodities not stored in bulk in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Animal Feed (continued)</u>		
Stored product insects (continued)		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8057.0005		
D7002083	2.7-3.4 g/ton or 56.4-82.1 g/ 1,000 cu.ft or 71.8-102.6 g/ 1,000 bu (57% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>tankers</u> . Fumigation exposure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 8 days; at 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8057.0005		

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsAnimal Feed (continued)

Stored-product insects (continued)

D7002083	5.1-10.3 g/ ton	Restricted use pesticide. Transportation vehicle treatment. For use in bulk dry cargo vessels. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is pre- sent. Refer to general warnings un- der (Stored, Processed Food and Feed Products (Including Tobacco), Stor- age and Handling Equipment) for specific information on use in <u>bulk dry cargo vessels</u> . Fumigation expo- sure periods are approximated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
	or	
8057.0005	128.25-248 g/ 1,000 cu.ft	
	or	
8057.0005	153.9-307.8 g/1,000 bu	
	(57% P/T)	
D7002083	5.1-10.3 g/ ton	Restricted use pesticide. Transportation vehicle treatment. For use in tankers. This usage in- tended for tableted form. The high- er dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Pro- cessed Food and Feed Products (In- cluding Tobacco), Storage and Han- dling Equipment) for specific infor- mation on use in <u>tankers</u> . Fumiga- tion exposure periods are approxi- mated as follows: At 40 to 53 F (4.4 to 11.7 C), 10 days; at 54 to 59 F (12.2 to 15.0 C), 5 days; at 60 to 68 F (15.6 to 20.0 C), 4 days; and above 68 F (20.0 C), 3 days.
	or	
8057.0005	128.25-248 g/ 1,000 cu.ft	
	or	
8057.0005	153.9-307.8 g/1,000 bu	
	(57% P/T)	

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4305600	<u>Candy, Processed</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4305621	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
8057.0003	cu.ft (57% D)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Candy, Processed (continued)

Stored product insects (continued)

\$4305637
D7001283
D7001883
6057.0003

58.14-116.28
g/l,000
cu.ft
(57% D)

Restricted use pesticide.
Transportation vehicle treatment.
For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in boxcars (static or rolling) or static trailer vans. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4301100	<u>Cereal Flour and Bakery Mixes</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pel- leted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried- fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw- toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301121	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific in- formation on use in <u>warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
6057.0003	(57% D)	
D4602483	34.1-54.5 g/ 1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged pel- leted form. The higher dosage rate should be used if the rice weevil is present. Fasten package to a sub- stantial support. Fumigation expo- sure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cereal Flour and Bakery Mixes (continued)

Stored product insects (continued)

D4602483	54.45-66 g/ 1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
8055.0005	(55% P/T)	
D4602483	74.25-99 g/ 1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 tablets per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
8055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cereal Flour and Bakery Mixes (continued)

Stored product insects (continued)

\$4301137 D7001283 D7001883 6057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) or static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
D7001283 D7001683 6055.0005 D7002283	34.1-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cereal Flour and Bakery Mixes (continued)

Stored product insects (continued)

D7001283	54.5-66 g/	Restricted use pesticide.
D7001683	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use in boxcars or hopper cars
D7002283		(static or rolling) or in unmanned
		barges. This usage intended for
		pelleted form. The higher dosage
		rate should be used if the rice
		weevil is present. Pellets must be
		contained in moisture permeable en-
		velopes. Do not put more than 10
		pellets per envelope. Envelopes
		must be fastened to a substantial
		support. Fumigation exposure per-
		iods are approximated as follows:
		At 54 to 59 F (12.2 to 15.0 C), 4
		days; at 60 to 68 F (15.6 to
		20.0 C), 3 days; and above 68 F
		(20.0 C), 2 days.
D7001283	74.25-99 g/	Restricted use pesticide.
D7001683	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use in boxcars or hopper cars
D7002283		(static or rolling) or in unmanned
		barges. This usage intended for
		tableted form. The higher dosage
		rate should be used if the rice
		weevil is present. Place tablets in
		moisture permeable envelopes, not
		more than 2 per envelope, and fas-
		ten envelopes to a substantial sup-
		port. Fumigation exposure periods
		are approximated as follows: At 54
		to 59 F (12.2 to 15.0 C), a minimum
		of 5 days; at 60 to 68 F (15.6 to
		20.0 C), a minimum of 4 days; and
		above 68 F (20.0 C), a minimum of 3
		days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4300100	<u>Cereal Foods (including cookies, crackers, macaroni, noodles, pasta, pretzels, snack foods, and spaghetti)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4300121		Stored commodity fumigation.
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	
. \$4300137		Transportation vehicle treatment.
S4301137	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/4300200	<u>Cereals, Processed (including milled fractions and packaged cereals)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4300221		Stored commodity fumigation.
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cereals, Processed (including milled fractions and packaged cereals)</u> (continued)		
Stored product insects (continued)		
\$4300237		Transportation vehicle treatment.
S4301137		Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.
/4304900	<u>Cheese and Cheese Byproducts</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4304921		Stored commodity fumigation.
S4305621		Refer to Candy, Processed, Stored product insects, Stored commodity fumigation for use and limitation information.
\$4304937		Transportation vehicle treatment.
S4305637		Refer to Candy, Processed, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4301300	<u>Chocolate and Chocolate Products</u> (Assorted Chocolate, Chocolate Liquor, Cocoa, Cocoa Powder, Dark Chocolate Coating, and Milk Chocolate)	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301321	Stored commodity fumigation.	
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4301337	Transportation vehicle treatment.	
S4301137	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/4300600	<u>Coffee, Processed</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4300621	Stored commodity fumigation.	
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Coffee, Processed</u> (continued)		
Stored product insects (continued)		
\$4300637		Transportation vehicle treatment.
S4301137		Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.
/4305000	<u>Corn, Grits</u>	0.01 ppm (as phosphine) No preconsumption interval when used in the manufacture of beer. Otherwise, a 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4305021	58.14-116.28	Restricted use pesticide.
D4600283	g/l,000	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form.
6057.0003	cu.ft (57% D)	The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Corn, Grits (continued)</u>		
Stored product insects (continued)		
D4600283	49.5-99 g/ 1,000 cu.ft	Restricted use pesticide.
6055.0005	(55% P/T)	Stored commodity fumigation. For use in brewery storage areas. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets may be added directly into the commodity or fed into the stream as the commodity flows into the storage areas. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
\$4305037	58.14-116.28	Restricted use pesticide.
D7001283	g/1,000	Transportation vehicle treatment.
D7001883	cu.ft	For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) or static trailer vans.</u>
6057.0003	(57% D)	Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Corn, Grits (continued)

Stored product insects (continued)

D7001283	74.25-99 g/	Restricted use pesticide.
D7001683	1,000 cu.ft	Transportation vehicle treatment.
8055.0005	(55% P/T)	For use in boxcars and hopper cars. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in special moisture permeable envelopes stapled to the walls or to a substantial horizontal support in boxcars or hopper cars (static or rolling). Not more than 2 tablets may be placed in 1 envelope. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4302500	<u>Cottonseed, Animal Feed</u>	0.1 ppm (as phosphine) Minimum of 2 day aeration interval through 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4302537	74.25-99 g/	Restricted use pesticide.
D7001283	1,000 cu.ft	Transportation vehicle treatment.
&055.0005	(55% P/T)	For use in boxcars and hopper cars.
D7001683		This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in special moisture permeable envelopes stapled to the walls or to a substantial horizontal support in boxcars or hopper cars (static or rolling). Not more than 2 tablets may be placed in 1 envelope. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4301500	<u>Cured Meat Products</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 99 grams per 1,000 cubic feet for pelleted/tableted formula- tion.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301521	34.1-54.5 g/	Restricted use pesticide.
D4602483	1,000 cu.ft	Stored commodity fumigation. For
6055.0005	(55% P/T)	use with gastight tarpaulins. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten package to a substantial support. Fumiga- tion exposure periods are approxi- mated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D4602483	54.5-66 g/	Restricted use pesticide.
6055.0005	1,000 cu.ft (55% P/T)	Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in mois- ture permeable envelopes. Do not put more than 10 pellets per enve- lope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cured Meat Products (continued)</u>		
Stored product insects (continued)		
D4602483	74.25-99 g/ 1,000 cu.ft	Restricted use pesticide.
6055.0005	(55% P/T)	Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 tablets per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
\$4301537	34.1-54.5 g/	Restricted use pesticide.
D7001283	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7001683		
D7002283		
D7001283	54.5-66 g/	Restricted use pesticide.
D7001683	1,000 cu.ft	Transportation vehicle treatment.
6055.0005	(55% P/T)	For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial
D7002283		

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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cured Meat Products (continued)

Stored product insects (continued)

support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

D7001283
D7001683
6055.0005
D7002283

74.25-99 g/
1,000 cu.ft
(55% P/T)

Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten envelopes to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

/4302300

Dried Egg Yolk Solids and Dried Eggs.

0.01 ppm (as phosphine)
2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$4302321

Stored commodity fumigation.

\$4301121

Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Dried Egg Yolk Solids and Dried Eggs (continued)</u>		
Stored product insects (continued)		
\$4302337		Transportation vehicle treatment.
S4301137		Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.
/4301600	<u>Dried Milk, Dried Powdered Milk, Nondairy Creamers, and Nonfat Instant Dried Milk</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301621		Stored commodity fumigation.
S4301121		Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.
\$4301637		Transportation vehicle treatment.
S4301137		Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4302600	<u>Fruits, Dried or Dehydrated</u> <u>(Apples, Dates, Figs, Peaches,</u> <u>Pears, Prunes, Raisins, and Sul-</u> <u>tanais)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 66 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried- fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw- toothed grain beetle, spider beetles, and yellow mealworm)	
\$4302621	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific in- formation on use in <u>warehouses and</u> <u>vaults</u> . Fumigation exposure per- iods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
&057.0003	(57% D)	
D4602483	34.1-54.5 g/ 1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged pel- leted form. The higher dosage rate should be used if the rice weevil is present. Fasten package to a sub- stantial support. Fumigation expo- sure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
&055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Fruits, Dried or Dehydrated (Apples, Dates, Figs, Peaches, Pears, Prunes, Raisins, and Sultanas) (continued)</u>		
Stored product insects (continued)		
D4602483	49.5 g/1,000 cu.ft	Restricted use pesticide.
6055.0005	(55% P/T)	Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 tablets per envelope, and fasten to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D4602483	54.45-66 g/1,000 cu.ft	Restricted use pesticide.
6055.0005	(55% P/T)	Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

Site and PestDosages and Formulation(s) Tolerance, Use, LimitationsFruits, Dried or Dehydrated (Apples, Dates, Figs, Peaches, Pears, Prunes, Raisins, and Sultanas) (continued)

Stored product insects (continued)

\$4602637
D7001283
D7001883
8057.0003

58.14-116.28
g/1,000
cu.ft
(57% D)

Restricted use pesticide.
Transportation vehicle treatment.
For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in boxcars (static or rolling) and static trailer vans. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

D7001283
D7001683
8055.0005
D7002283

34.1-54.5 g/
1,000 cu.ft
(55% P/T)

Restricted use pesticide.
Transportation vehicle treatment.
For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Fruits, Dried or Dehydrated (Apples, Dates, Figs, Peaches, Pears, Prunes, Raisins, and Sultanas) (continued)</u>		
Stored product insects (continued)		
D7001283 D7001683 &055.0005 D7002283	49.5 g/1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for tableted form. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fasten envelopes to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
D7001283 D7001683 &055.0005 D7002283	54.5-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4300800	<u>Herbs, Spices, or Seasonings,</u> <u>Processed</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pel- leted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried- fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw- toothed grain beetle, spider beetles, and yellow mealworm)	
\$4300821		Stored commodity fumigation.
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4300837		Transportation vehicle treatment.
S4301137	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4301800 <u>Malt</u>		0.01 ppm (as phosphine) No preconsumption interval when used in the manufacture of beer. Otherwise, a 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301821	58.14-116.28	Restricted use pesticide.
D4600283	g/1,000 cu.ft	Stored commodity fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
\$057.0003	(57% D)	
D4602483	34.1-54.5 g/ 1,000 cu.ft	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
\$055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

Site and PestDosages and
Formulation(s)Tolerance, Use, LimitationsMalt (continued)

Stored product insects (continued)

D4600283	49.5-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in brewery storage areas. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. The tablets may be added directly into the commodity or fed into the stream as the commodity flows into the storage area. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
&055.0005		
D4602483	54.45-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
&055.0005		
D4602483	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use with gastight tarpaulins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 tablets per envelope, and fasten to a substantial support. Fumigation expo-
&055.0005		

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Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Malt (continued)

Stored product insects (continued)

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sure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

\$4301837
D7001283
D7001883
8057.0003

58.14-116.28
g/1,000
cu.ft
(57% D)

Restricted use pesticide.
Transportation vehicle treatment. For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in boxcars (static or rolling) or static trailer vans. Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.

D7001283
D7001683
8055.0005
D7002283

34.1-54.5 g/
1,000 cu.ft
(55% P/T)

Restricted use pesticide.
Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for prepackaged pelleted form. The higher dosage rate should be used if the rice weevil is present. Fasten pellet package to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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ALUMINUM PHOSPHIDE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Malt (continued)

Stored product insects (continued)

D7001283 D7001683 &055.0005 D7002283	54.5-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable en- velopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure per- iods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
D7001283 D7001683 &055.0005 D7002283	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Transportation vehicle treatment. For use in boxcars or hopper cars (static or rolling) or in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. Place tablets in moisture permeable envelopes, not more than 2 per envelope, and fas- ten envelopes to a substantial sup- port. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4304700	<u>Meat Products</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4304721	Stored commodity fumigation.	
S4305621	Refer to Candy, Processed, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4304737	Transportation vehicle treatment.	
S4305637	Refer to Candy, Processed, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/4304800	<u>Nut Meats, Processed (Almonds, Apricot Kernels, Brazil Nuts, Cashews, Filberts, Peanuts, Pecans, Pistachio Nuts, and Walnuts)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 66 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4304821	Stored commodity fumigation.	
S4302621	Refer to Fruits, Dried or Dehydrated (Apples, Dates, Figs, Peaches, Pears, Prunes, Raisins, and Sultanas), Stored product insects, Stored commodity fumigation for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Nut Meats, Processed (Almonds, Apricot Kernels, Brazil Nuts, Cashews, Filberts, Peanuts, Pecans, Pistachio Nuts, and Walnuts) (continued)</u>		
Stored product insects (continued)		
\$4304837		Transportation vehicle treatment.
S4302637		Refer to Fruits, Dried or Dehydrated (Apples, Dates, Figs, Peaches, Pears, Prunes, Raisins, and Sultanas), Stored product insects, Transportation vehicle treatment for use and limitation information.
/4305200	<u>Oats, Processed (including oatmeal)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4305221		Stored commodity fumigation.
S4305621		Refer to Candy, Processed, Stored product insects, Stored commodity fumigation for use and limitation information.
\$4305237		Transportation vehicle treatment.
S4305637		Refer to Candy, Processed, Stored product insects, Transportation vehicle treatment for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4302800	<u>Rice (Brewer's Rice Grits, Enriched, and Polished)</u>	0.01 ppm (as phosphine) No preconsumption interval when used in the manufacture of beer. Otherwise, a 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4302821		Stored commodity fumigation.
S4305021		Refer to Corn, Grits; Stored product insects, Stored commodity fumigation for use and limitation information.
\$4302837		Transportation vehicle treatment.
S4305037		Refer to Corn, Grits, Stored product insects, Transportation vehicle treatment for use and limitation information.
/4302000	<u>Soybean Flour and Soybean Milled Fractions</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4302021		Stored commodity fumigation.
S4301521		Refer to Cured Meat Products, Stored product insects, Stored commodity fumigation for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybean Flour and Soybean Milled Fractions (continued)</u>		
Stored product insects (continued)		
\$4302037		Transportation vehicle treatment.
S4301537	Refer to Cured Meat Products, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/4302200	<u>Sugar</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4302221		Stored commodity fumigation.
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4302237		Transportation vehicle treatment.
S4301137	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4300500	<u>Tea, Processed</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation, or 99 grams per 1,000 cubic feet for pel- leted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried- fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw- toothed grain beetle, spider beetles, and yellow mealworm)	
\$4300521		Stored commodity fumigation.
S4301121	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4300537		Transportation vehicle treatment.
S4301137	Refer to Cereal Flour and Bakery Mixes, Stored product insects, Transportation vehicle treatment for use and limitation information.	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4300900	<u>Tobacco, Cured and Processed</u>	N.F. Minimum postfumigation aeration time is 3 days for hogsheads and 2 days for other containers. At room temperatures between 40 and 59 F (4.4 and 15.0 C), the aeration time is 4 days for both.
@INABADA \$4300921 D4600483 6057.0003	Cigarette beetle 38.76 g/1,000 cu.ft (57% D)	Restricted use pesticide. Stored commodity fumigation. For use in warehouses and containers. This usage intended for bagged form. Above 68 F (20.0 C), there is a 4 day minimum exposure period; between 60 and 68 F (15.6 and 20.0 C), there is a 6 day minimum exposure period. Above 60 F (15.6 C), there is a minimum aeration period of 3 days for hogsheads and 2 days for other containers. Between 40 and 59 F (4.4 and 15.0 C), the eggs and pupae of the cigarette beetle may survive. Approximate exposure periods at these temperatures are as follows: At 59 F (20.0 C), 7 days; at 40 F (4.4 C), 14 days. At these temperatures a 4 day minimum postfumigation aeration period is required.
D4600483 D4600883 6055.0005	33-49.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in hogsheads and other storage containers. This usage intended for tableted form. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15. to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days. There is a minimum aeration period of 3 days for hogsheads and 2 days for other containers.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Tobacco, Cured and Processed (continued)

Cigarette beetle (continued)

D4600483 D4600883 &055.0005	33-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in hogsheads and other storage containers. This usage intended for pelleted form. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days. There is a minimum aeration period of 3 days for hogsheads and 2 days for other containers.
D4600483 &057.0005	34.2 g/1,000 cu.ft (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in warehouses. This usage intended for tableted form. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>tobacco warehouses</u> . Fumigation exposure periods are approximated as follows: Above 68 F (20.0 C), 4 days; 60 to 68 F (15.6 to 20.0 C), 6 days; 59 F (15.0 C), 7 days; and 40 F (4.4 C), 14 days. When temperatures are between 40 and 59 F (4.4 to 15.0 C), the eggs and pupae of the cigarette beetle may survive. There is a minimum aeration period of 4 days after fumigation.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Tobacco, Cured and Processed (continued)</u>		
<u>Cigarette beetle (continued)</u>		
D4600483	34.2 g/1,000 cu.ft	Restricted use pesticide.
6057.0005	(57% P/T)	Stored commodity fumigation. For use in containers. This usage intended for tableted form. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>containers</u> . Fumigation exposure periods are approximated as follows: Above 68 F (20.0 C), 4 days; 60 to 68 F (15.6 to 20.0 C), 6 days; 59 F (15.0 C), 7 days; and 40 F (4.4 C), 14 days. When temperatures are between 40 and 59 F (4.4 to 15.0 C), the eggs and pupae of the cigarette beetle may survive. There is a minimum aeration period of 4 days after fumigation.
D4600483	34 g/1,000 cu.ft	Restricted use pesticide.
6057.0005	(57% P/T)	Stored commodity fumigation. For use in warehouses. This usage intended for pelleted form. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>tobacco warehouses</u> . Fumigation exposure periods are approximated as follows: Above 68 F (20.0 C), 4 days; 60 to 68 F (15.6 to 20.0 C), 6 days; 59 F (15.0 C), 7 days; and 40 F (4.4 C), 14 days. When temperatures are between 40 and 59 F (4.4 to 15.0 C), the eggs and pupae of the cigarette beetle may survive. There is a minimum aeration period of 4 days after fumigation.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Tobacco, Cured and Processed (continued)</u>		
Cigarette beetle (continued)		
D4600483 6057.0005	34 g/l,000 cu.ft (57% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in containers. This usage intended for pelleted form. Refer to general warnings under (Stored, Processed Food and Feed Products (Including Tobacco), Storage and Handling Equipment) for specific information on use in <u>containers</u> . Fumigation exposure periods are approximated as follows: Above 68 F (20.0 C), 4 days; 60 to 68 F (15.6 to 20.0 C), 6 days; 59 F (15.0 C), 7 days; and 40 F (4.4 C), 14 days. When temperatures are between 40 and 59 F (4.4 to 15.0 C), the eggs and pupae of the cigarette beetle may survive. There is a minimum aeration period of 4 days after fumigation.
@ITBMBEA \$4300921 D4600483 6055.0005 D4600883	Tobacco moth 33-49.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in hogsheads and other storage containers. This usage intended for tableted form. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days. There is a minimum aeration period of 3 days for hogsheads and 2 days for other containers.
D4600483 D4600883 6055.0005	33-54.5 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored commodity fumigation. For use in hogsheads and other storage containers. This usage intended for pelleted form. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Tobacco, Cured and Processed (continued)</u>		
Tobacco moth (continued)		
;		15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days. There is a minimum aeration period of 3 days for hogsheads and 2 days for other containers.
/4301000	<u>Vegetables, Dried or Dehydrated</u> <u>(Carrots, Potato Flour, and Spinach)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301021		Stored commodity fumigation.
S4301521	Refer to Cured Meat Products, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4301037		Transportation vehicle treatment.
S4301537	Refer to Cured Meat Products, Stored product insects, Transportation vehicle treatment for use and limitation information.	

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4305100	<u>Wheat, Processed (Bran, Bulgar, Cream, Germ, Shorts, and Whole Wheat)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 116.28 grams per 1,000 cubic feet for dust formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4305121		Stored commodity fumigation.
S4305621	Refer to Candy, Processed, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4305137		Transportation vehicle treatment.
S4305637	Refer to Candy, Processed, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/4301900	<u>Yeast (including primary yeast)</u>	0.01 ppm (as phosphine) 2 day preconsumption interval through 99 grams per 1,000 cubic feet for pelleted/tableted formulation.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4301921		Stored commodity fumigation.
S4301521	Refer to Cured Meat Products, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4301937		Transportation vehicle treatment.
S4301537	Refer to Cured Meat Products, Stored product insects, Transportation vehicle treatment for use and limitation information.	

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

: (Stored Nonfeed/Nonfood Products, Storage and Handling Equipment)

General Warnings and Limitations:

Warehouses and vaults

Tightly seal and lock all passageways to connecting buildings. Evacuate buildings during fumigation. Determine beforehand a distribution plan for placement of the bags. Floor area selected should be clean, dry, and unobstructed. Use as much of the floor space as possible to spread out the bags. Very large buildings may require several operators to complete the placement within the one-half hour period before phosphine gas is released. Operators should carry approved gas masks at all times. Open cans in the open air outside of the building. Place bags onto the floor in a systematic manner without overlapping or allowing them to touch. Do not toss bags in inaccessible areas. Vacate building and secure with a lock. For multiple story buildings, placement should begin with the uppermost floor and end with the ground floor. After required exposure time, open as many ground level doors as possible without entering the building. Working in pairs and wearing approved gas masks, enter the building after approximately 2 hours and open remaining doors and windows. Permit building to air out several hours, then test for the presence of phosphine gas. When the building is free of gas, gather up all the spent bags and remove them from the building. Check bag count with the original placement count.

Boxcars (static or rolling) and static trailer vans

Use 2 pieces of heavy cardboard. Divide the total dosage, using one-half for each piece. Place the bags on the cardboard spaced a minimum of 1 inch apart to avoid overlapping. Tape only bag ends to the cardboard. Take the prepared boards into the car and secure 1 in each end, bag side up, to the load. If the load is covered with paper, secure cardboard to paper. If possible, drape remaining doorway with polyethylene film before door is closed. Secure edges to door jams and floor. Close and secure door. If doorway is not draped, seal cracks, openings, and joints from the outside. When fumigating railcars in-transit, provide the receiver with bag disposal instructions and first aid procedures.

EPA Index to Pesticide Chemicals

ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4400600	<u>Cotton, Cloth and/or Processed</u>	
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4400621	58.14-116.28	Restricted use pesticide.
D4600483	g/l,000	Stored commodity fumigation. For
	cu.ft	use in warehouses and vaults. This
&057.0003	(57% D)	usage intended for bagged form. The
		higher dosage rate should be used if
		the rice weevil is present. Refer
		to general warnings under (Stored
		Nonfeed/Nonfood, Storage and Han-
		dling Equipment) for specific infor-
		mation on use in <u>warehouses and</u>
		<u>vaults</u> . Fumigation exposure periods
		are approximated as follows: At 40
		to 49 F (4.4 to 9.4 C), 14 days; at
		50 to 59 F (10.0 to 15.0 C), 7 days;
		at 60 to 77 F (15.6 to 25.0 C), 4
		days; at 77 F (25.0 C) or above, 3
		days.
\$4400637	58.14-116.28	Restricted use pesticide.
D7000583	g/l,000	Transportation vehicle treatment.
D7000683	cu.ft	For use in boxcars (static or roll-
&057.0003	(57% D)	ing) or static trailer vans. This
		usage intended for bagged form.
		The higher dosage rate should be
		used if the rice weevil is present.
		Refer to general warnings under
		(Stored Nonfeed/Nonfood, Storage and
		Handling Equipment) for specific in-
		formation on use in <u>boxcars (static</u>
		<u>or rolling)</u> and <u>static trailer vans</u> .
		Fumigation exposure periods are ap-
		proximated as follows: At 40 to
		49 F (4.4 to 9.4 C), 14 days; at 50
		to 59 F (10.0 to 15.0 C), 7 days; at
		60 to 77 F (15.6 to 25.0 C), 4 days;
		at 77 F (25.0 C) or above, 3 days.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/4400700	<u>Feathers, Human Hair, Rubberized Hair, Vulcanized Hair, Moe Hair, and Raw Wool</u>	
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$4400721		Stored commodity fumigation.
S4400621	Refer to Cotton, Cloth and/or Processed, Stored product insects, Stored commodity fumigation for use and limitation information.	
\$4400737		Transportation vehicle treatment.
S4400637	Refer to Cotton, Cloth and/or Processed, Stored product insects, Transportation vehicle treatment for use and limitation information.	
/2806600	<u>Grasses Grown for Seed</u>	N.F.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2806618	3.3 g/ton or 39.6-99 g/ 1,000 bu	Restricted use pesticide. Stored seed fumigation. For use in storage bins or in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage area. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6055.0005	(55% P/T)	

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Grasses Grown for Seed (continued)</u>		
Stored product insects (continued)		
6055.0005	9.9 g/ton or 99-297 g/ 1,000 bu (55% P/T)	Restricted use pesticide. Stored seed fumigation. For use in storage bins or in unmanned barges. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is present. May be injected into the commodity with a probe or may be fed into the commodity stream at uniform spacing as it is flowing into the storage area. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.
6055.0005	54.5-66 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored seed fumigation. For use with commodities not stored in bulk in storage bins or in unmanned barges. This usage intended for pelleted form. The higher dosage rate should be used if the rice weevil is present. Pellets must be contained in moisture permeable envelopes. Do not put more than 10 pellets per envelope. Envelopes must be fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.
6055.0005	74.25-99 g/ 1,000 cu.ft (55% P/T)	Restricted use pesticide. Stored seed fumigation. For use with commodities not stored in bulk in unmanned barges or in storage bins. This usage intended for tableted form. The higher dosage rate should be used if the rice weevil is

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Grasses Grown for Seed (continued)

Stored product insects (continued)

present. The tablets must be contained in moisture permeable envelopes, not more than 2 per envelope, and fastened to a substantial support. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

/3100000

Ornamental Herbaceous Plants, Seeds

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$3100018

Stored seed fumigation.

S2806618

Refer to Grasses Grown for Seed, Stored product insects, Stored seed fumigation for use and limitation information.

/2804000

Seeds

N.F.

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$2804018

58.14-116.28 Restricted use pesticide.

g/1,000

cu.ft

(57% D)

Stored seed fumigation. For use in warehouses and vaults. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Non-feed/Nonfood Products, Storage and

\$057.0003

Use pattern continued on the next page.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Seeds (continued)

Stored product insects (continued)

;		Handling Equipment) for specific information on use in <u>warehouses and vaults</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
\$057.0003	58.14-116.28 g/l,000 cu.ft (57% D)	Restricted use pesticide. Stored seed fumigation. For use in boxcars (static or rolling) or static trailer vans. This usage intended for bagged form. The higher dosage rate should be used if the rice weevil is present. Refer to general warnings under (Stored Non-feed/Nonfood Products, Storage and Handling Equipment) for specific information on use in <u>boxcars (static or rolling) and static trailer vans</u> . Fumigation exposure periods are approximated as follows: At 40 to 49 F (4.4 to 9.4 C), 14 days; at 50 to 59 F (10.0 to 15.0 C), 7 days; at 60 to 77 F (15.6 to 25.0 C), 4 days; at 77 F (25.0 C) or above, 3 days.
/2802400	<u>Vegetables, Seeds</u>	N.F.
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$2802418		Stored seed fumigation.
\$2806618		Refer to Grasses Grown for Seed, Stored product insects, Stored seed fumigation for use and limitation information.

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ALUMINUM PHOSPHIDE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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COMMERCIAL ESTABLISHMENTS

General Warnings and Limitations: All safety precautions such as sealing of building, padlocking and placarding of entrances, notifying police and fire officials, and posting of guards, must be adhered to.

(Commercial Establishments (edible product areas))

/7102100

Cereal Processing Plants/Mills

@IMAAFA

Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)

\$7102138

33-49.5 g/

Restricted use pesticide.

1,000 cu.ft

Empty storage area treatment. This usage intended for tableted form.

8055.0005

(55% P/T)

The higher dosage rate should be used if the rice weevil is present. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), a minimum of 5 days; at 60 to 68 F (15.6 to 20.0 C), a minimum of 4 days; and above 68 F (20.0 C), a minimum of 3 days.

33-49.5 g/

Restricted use pesticide.

1,000 cu.ft

Empty storage area treatment. This usage intended for pelleted form.

8055.0005

(55% P/T)

The higher dosage rate should be used if the rice weevil is present. Fumigation exposure periods are approximated as follows: At 54 to 59 F (12.2 to 15.0 C), 4 days; at 60 to 68 F (15.6 to 20.0 C), 3 days; and above 68 F (20.0 C), 2 days.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/7100600	<u>Feed Mills</u>	
@IMAAFA	Stored product insects (almond moth, angoumois grain moth, bean weevil, cadelle, confused flour beetle, dermestid beetles, dried-fruit beetle, driedfruit moth, european grain moth, flat grain beetle, granary weevil, hairy fungus beetle, indianmeal moth, khapra beetle, lesser grain borer, mediterranean flour moth, pink bollworm, raisin moth, red flour beetle, rice weevil, rusty grain beetle, saw-toothed grain beetle, spider beetles, and yellow mealworm)	
\$7100638		Empty storage area treatment.
S7102138	Refer to Cereal Processing Plants/Mills, Stored product insects, Empty storage area treatment for use and limitation information.	

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ALUMINUM PHOSPHIDE

Listing of Registered Pesticide Products by Formulation

6057.0003	<u>57% dust</u>			
#	aluminum phosphide (066501)			
	002548-00059			
6055.0005	<u>55% pelleted/tableted</u>			
#	aluminum phosphide (066501)			
	002749-00130	005857-00001	005857-00002	005857-00004
	040285-00001	040285-00002	040285-00003	
6057.0005	<u>57% pelleted/tableted</u>			
#	aluminum phosphide (066501)			
	002548-00062	002548-00063		
6060.0005	<u>60% pelleted/tableted</u>			
#	aluminum phosphide (066501)			
	000449-00540	030574-00001		

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State Label Registrations

CA Reg. No.

005857-04782	005857-04783	005857-04785	005857-04786
005857-04787			

TX Reg. No.

005857-04784	005857-04788
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